

# 1345 Baseline Road

Functional Servicing Report



Stantec Consulting Ltd.

Prepared for:  
Bertone Development Corporation

Date:  
May 7, 2026

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Project/File:  
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## Revision Record

Revision	Description	Author	Date	Quality Check	Date	Independent Review	Date
0	Issued for ZBLA	MW	15-April-2026	PM	08-May-2026	ALG	07-May-2026

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# Table of Contents

<b>1</b>	<b>Introduction .....</b>	<b>1</b>
<b>2</b>	<b>Background .....</b>	<b>3</b>
<b>3</b>	<b>Potable Water Servicing .....</b>	<b>4</b>
3.1	Background .....	4
3.2	Design Criteria .....	4
3.2.1	Water Demand and Allowable Pressure .....	4
3.2.2	Fire Flow and Hydrant Capacity .....	5
3.3	Water Demands .....	5
3.3.1	Domestic Water Demands .....	5
3.3.2	Fire Flow Demands .....	5
3.3.3	Boundary Conditions .....	6
3.3.4	Servicing Pressures .....	6
3.3.5	Fire Flow Pressures .....	6
3.3.6	Fire Hydrant Coverage .....	7
3.4	Proposed Servicing .....	7
<b>4</b>	<b>Wastewater Servicing .....</b>	<b>8</b>
4.1	Background .....	8
4.2	Design Criteria .....	8
4.3	Wastewater Generation .....	8
4.4	Proposed Servicing .....	9
<b>5</b>	<b>Stormwater Management and Servicing .....</b>	<b>10</b>
5.1	Objectives .....	10
5.2	Stormwater Management (SWM) Criteria and Constraints .....	10
5.3	Existing Conditions .....	11
5.4	Stormwater Management Design .....	11
5.4.1	Allowable Release Rate .....	12
5.4.2	Quantity Control .....	13
5.4.3	Quality Control .....	14
5.5	Results .....	14
5.6	Proposed Stormwater Servicing .....	14
<b>6</b>	<b>Site Grading and Drainage .....</b>	<b>16</b>
<b>7</b>	<b>Utilities .....</b>	<b>16</b>
<b>8</b>	<b>Approvals .....</b>	<b>17</b>
<b>9</b>	<b>Erosion Control during Construction .....</b>	<b>18</b>
<b>10</b>	<b>Geotechnical Investigation and Environmental Assessment .....</b>	<b>19</b>
10.1	Geotechnical Investigation .....	19
10.2	Environmental Site Assessment (ESA) .....	19
<b>11</b>	<b>Conclusion .....</b>	<b>20</b>

## List of Tables

Table 1.1:	Preliminary Attributes of Site .....	2
Table 3.1:	Table 18.5.4.3 of the NFPA - Maximum Fire Hydrant Fire Flow Capacity .....	5
Table 3.2:	Estimated Water Demands .....	5
Table 3.3:	Boundary Conditions .....	6
Table 3.4:	Onsite Residual Pressures Under Domestic Demands .....	6
Table 4.1:	Estimated Wastewater Peak Flow .....	9
Table 5.1:	Summary of Post-Development Drainage Areas .....	11
Table 5.2:	Allowable Target Release Rate .....	12
Table 5.3:	Peak Post-Development Discharge of Area UNC-1 .....	13
Table 5.4:	Estimated Post-Development Discharge .....	13



**1345 Baseline Road**

Table of Contents

Table 5.5: Summary of Total 2-Year and 100-Year Event Release Rates ..... 14

**List of Figures**

Figure 1.1: Key Plan of Site ..... 1

**List of Appendices**

**Appendix A Background**

A.1 Draft Site Plan

A.2 Pre-Consultation

**Appendix B Water Servicing**

B.1 Domestic Water Demands

B.2 Fire Flow Demands

B.3 Boundary Conditions

B.4 Fire Hydrant Coverage Table

**Appendix C Wastewater Servicing**

C.1 Sanitary Sewer Design Sheet

C.2 Sanitary Sewer Capacity Correspondence

**Appendix D Stormwater Management**

D.1 Modified Rational Method Calculation Sheets

D.2 Storm Sewer Design Sheet



# 1 Introduction

Stantec Consulting Ltd. (Stantec) has been commissioned by Bertone Management Inc. to prepare the following Functional Servicing Report in support of a Zoning By-law Amendment (ZBLA) application to permit the proposed redevelopment of 1345 Baseline Road in the City of Ottawa.

The 1.32 ha site is currently zoned H2[436]H(30) – Hub Zone 2 under the zoning by-law consolidated in March 2026 and consists of the former Scouts Canada national office building and paved parking areas. Situated 300m east of the Clyde Avenue and Baseline Road intersection, the site is bound by existing commercial development to the west, institutional developments with parking to the north and east, and Baseline Road to the south, as shown in **Figure 1.1**.



*Figure 1.1: Key Plan of Site*

The proposed development consists of four mixed-use residential high-rise buildings, two levels of underground parking, a private open public space (POPS), and an allocation of parkland, as shown in the Site Plan provided by RLA Architecture Inc., dated March 23, 2026 (Revision 3, see **Appendix A.1**). Buildings A and B will constitute Phase 1, and Buildings C and D, which share a six-story podium, constitute Phase 2. Each phase has separate and abutting underground parking structure and will be independently serviced to allow for future severance.

The preliminary mixed-use attributes for each building are listed in **Table 1.1**. Each building has its own underground parking, all two levels.



Table 1.1: Preliminary Attributes of Site

Site Statistics	PHASE 1			PHASE 2		
Use/Attribute	Building A	Building B	Total PH1	Building C	Building D	Total PH2
<b>Above Ground Storeys</b>						
Podium	4	4	-	6	6	-
Tower	36	30	-	22	28	-
<b>Total Above Ground Storeys</b>	<b>40</b>	<b>34</b>	<b>-</b>	<b>28</b>	<b>34</b>	<b>-</b>
Underground Parking Levels	-	-	<b>2</b>	-	-	<b>2</b>
Preliminary Commercial Area (m <sup>2</sup> )	257	681	<b>938</b>	-	-	-
Residential Units	370	307	<b>677</b>	244	330	<b>574</b>
<b>Unit Types</b>						
Studio	-	28	<b>28</b>	22	-	<b>22</b>
One-bedroom	68	59	<b>127</b>	50	54	<b>104</b>
One-bedroom with den	154	93	<b>247</b>	69	141	<b>210</b>
Two-bedroom	142	121	<b>263</b>	97	123	<b>220</b>
Two-bedroom with den	6	6	<b>12</b>	6	12	<b>18</b>

The site is proposed to be accessed from Baseline Road via a private driveway through the existing SmartCentres Laurentian Place entrance to the west of the subject site. Centrally within the site, the proposed internal driveway provides access to the Phase 1 underground parking ramp and the proposed private lane along the north side of the site provides access to the Phase 2 underground parking ramp as well as a possible future road connection. Pedestrian access is available through a proposed network of sidewalks and walkways on the site.

The intent of this report is to provide a functional servicing scenario for the site that is free of conflicts, provides on-site servicing in accordance with City of Ottawa design guidelines, and uses the existing local infrastructure in accordance with any limitations communicated during consultation with City of Ottawa staff.



## 2 Background

Documents referenced in preparation of the functional design for the 1345 Baseline Road development include:

- *City of Ottawa Sewer Design Guidelines (SDG 004) 4th Edition*, City of Ottawa, December 2025.
- *City of Ottawa Water Distribution Design Guidelines (WDG 002) 2nd Edition*, City of Ottawa, December 8, 2025.
- *Design Guidelines for Drinking Water Systems*, Ministry of the Environment, Conservation, and Parks (MECP), 2008, including all amendments.
- *Fire Protection Water Supply Guideline for Part 3 in the Ontario Building Code*, Office of the Fire Marshal (OFM), October 1999 (OFM-TG-03-1999).
- *Water Supply for Public Fire Protection*, Fire Underwriters Survey (FUS), 2020.
- *Geotechnical Investigation, Proposed High-Rise Development 1345 Baseline Road, Ottawa, Ontario*, Prepared for Scouts Canada c/o Colliers by Paterson Group (Report: PG6129-1), March 2022.
- *Phase I – Environmental Site Assessment, 1345 Baseline Road, Ottawa, Ontario*, Prepared for Scouts Canada c/o Colliers by Paterson Group (Report: PE5585-1), May 2022.
- *1345 Baseline Road – Functional Servicing Report*, Prepared for Scouts Canada c/o Colliers by Stantec Consulting Ltd., June 16, 2022.
- *Pre-Consultation: Meeting Feedback Proposed Site-Plan Control Application – 1345 Baseline*, City of Ottawa File No.: PC2025-0177, July 2, 2025.



## 3 Potable Water Servicing

### 3.1 Background

The site is located within Pressure Zone 2W2C of the City of Ottawa's water distribution system. The existing municipal watermain adjacent to the site is the existing 400 mm watermain within the Baseline Road right of way (ROW). There is also an existing municipal fire hydrant at the south of the site in the Baseline Road ROW. The existing building water service laterals, located under the main entrance of the existing building, are to be blanked at the main by City of Ottawa forces, as indicated in **Drawing SSP-1**.

### 3.2 Design Criteria

#### 3.2.1 Water Demand and Allowable Pressure

The domestic water demand and allowable water pressure are assessed using the City of Ottawa Water Distribution Guidelines (2025) as amended.

##### Residential Apartment Population Rate

Studio and 1 Bedroom	1.4 persons / unit
1 Bedroom + Den and 2 Bedroom	2.1 persons / unit
2 Bedroom + Den	3.1 persons / unit

##### Residential Apartment Demand

Average Daily (AVDY)	280 L/cap/day
Maximum Daily (MXDY)	2.5 × AVDY
Peak Hour (PKHR)	2.2 × MXDY

##### Commercial Demand

Average Daily (AVDY)	28,000 L/gross ha/day
Maximum Daily (MXDY)	1.5 × AVDY
Peak Hour (PKHR)	1.8 × MXDY

##### Allowable Water Pressure

MXDY Flow	345 kPa (50 psi) to 552 kPa (80 psi)
PKHR Flow Minimum	276 kPa (40 psi)
MXDY + Fire Flow	140 kPa (20 psi)
Maximum Allowable for Occupied Area	552 kPa (80 psi)



### 3.2.2 Fire Flow and Hydrant Capacity

Detailed fire flow requirements are assessed using the Fire Underwriters Survey (FUS) methodology (2020). Site specific criteria considered are noted in **Section 3.3.2**.

The minimum number of fire hydrants required to meet the fire flow is assessed using Section 18.5 of the National Fire Protection Agency (NFPA) Fire Code document.

- The aggregate fire flow capacity of all fire hydrants within 305m of the building cannot be less than the required fire flow (RFF)
- Table 18.5.4.3 provides the maximum fire flow capacity for which an individual fire hydrant can be credited based on the unobstructed distance from the hydrant to the building.

*Table 3.1: Table 18.5.4.3 of the NFPA - Maximum Fire Hydrant Fire Flow Capacity*

Distance to Building (m)	Maximum Capacity (L/min)
≤76	5,678
>76 and ≤152	3,785
>152 and ≤305	2,839

## 3.3 Water Demands

### 3.3.1 Domestic Water Demands

Based on the site layout, the proposed development is estimated to have a total population of 2,460 persons. For conservative estimates of the commercial demand, the full developable site area (1.23 ha) was used as the gross commercial area. The estimated demands are summarized in **Table 3.2** and detailed in **Appendix B.1**.

*Table 3.2: Estimated Water Demands*

Buildings	Population	Gross Commercial (m <sup>2</sup> )	AVDY (L/s)	MXDY (L/s)	PKHR (L/s)
Phase 1: A-B	677	6,165	4.3	10.7	23.6
Phase 2: C-D	574	6,165	3.7	9.2	20.2

### 3.3.2 Fire Flow Demands

Fire flow requirements were estimated using the Fire Underwriters Survey (FUS) and is based on a building of non-combustible construction with a two-hour fire separation provided between each floor per Ontario Building Code (OBC) requirements for buildings over six storeys. As a result, the 'gross construction area' of the floor with the largest footprint (Buildings C-D: 2,428 m<sup>2</sup>) + 25% of the gross construction area of the two immediately adjoining floors were used for the purpose of the FUS calculation, as per Page 22 of the Fire



Underwriters Survey's Water Supply for Public Fire Protection, 2020. Additionally, it is anticipated that the building will be sprinklered, with final sprinkler design to conform to the NFPA 13 standards.

The worst-case fire flow demands for the site applies to Buildings C-D with a fire flow demand of 83 L/s (5,000 L/min). Detailed fire flow calculations per the FUS methodology are provided in **Appendix B.2**.

### 3.3.3 Boundary Conditions

The estimated domestic water and fire flow demands are used to confirm the level of servicing available for the proposed development from the adjacent municipal watermain and hydrants. **Table 3.3** outlines the updated boundary conditions for the proposed connections servicing the site, provided by the City of Ottawa on April 29, 2026, with correspondence attached in **Appendix B.3**.

*Table 3.3: Boundary Conditions*

Connection Location	Baseline Road 1 (Phase 1)	Baseline Road 2 (Phase 2)
Minimum HGL (m)	124.9	124.8
Maximum HGL (m)	133.0	133.0
Max. Day + FF (50 L/s) (m)	129.2	-
Max. Day + FF (83 L/s) (m)	-	128.6
Max. Day + FF (167 L/s) (m)	127.3	127.1

### 3.3.4 Servicing Pressures

The proposed finished floor elevation for the first floor of the apartment buildings serves as the reference elevations to determine the residual pressures at ground level. The FFEs of the buildings and onsite pressures at ground level are summarized in **Table 3.4**.

*Table 3.4: Onsite Residual Pressures Under Domestic Demands*

Building	FFE (m)	Minimum Pressure (psi)	Maximum Pressure (psi)
A	101.15	33.8	45.3
B	101.15	33.8	45.3
C-D	101.15	33.6	45.3

### 3.3.5 Fire Flow Pressures

The boundary condition HGL elevations show that the water distribution system can provide the required fire flows for the site (167 L/s) while maintaining a residual pressure greater than 138 kPa (20 psi).



Booster pump requirements are to be confirmed by the mechanical engineering consultant to ensure adequate water pressure at and above the ground floor elevations.

### **3.3.6 Fire Hydrant Coverage**

There is an existing municipal fire hydrant on Baseline Road in the proximity of the proposed development site, as shown on **Drawing SSP-1**. The buildings will be sprinklered and a fire department connection (FDC) is provided on each building. As per Section 3.2.5.15 of the Ontario Building Code, the distance between one hydrant and the building FDC cannot exceed 45 m.

Two new private fire hydrants are proposed onsite that would provide adequate coverage for all buildings and meet the OBC requirements. Potential locations for the proposed hydrants, FDC's and the designated fire route are indicated on **Drawing SSP-1**. The locations of these features are conceptual only, will be subject to change at detailed design.

To determine the number of fire hydrants required to meet the RFF of each building, the aggregate fire flow capacity of the nearby hydrants must be considered. According to the NFPA 1 Table 18.5.4.3, the worst-case RFF for the site (5,000 L/min) can be achieved with the nearest proposed hydrant. See **Appendix B.4** for fire hydrant coverage table calculations.

## **3.4 Proposed Servicing**

The water servicing concept for the site includes separate services for each phase of the development. Each phase will be serviced by dual water service connections to the existing 400 mm diameter CI watermain within Baseline Road. The dual connections will be separated by a new isolation valve installed on the municipal watermain. For each Phase, one water service will have a valve and valve box situated at the property line, and the second service will have a W3 valve chamber at the property line. Building water meters will be situated in the water entry rooms, and the remote meters will be mounted in an accessible location on the building exterior.

The boundary conditions have indicated the existing 400 mm diameter watermain within Baseline Road can provide adequate flows and pressures to satisfy the fire and domestic demands for the subject site based on the City of Ottawa Design Guidelines and FUS 2020 calculations. The existing municipal fire hydrant may be relocated north to accommodate the future road widening of Baseline Road. To be coordinated at detailed design.

The Parkland is to be serviced with a 50mm water service and a park water meter chamber to facilitate future park amenities.

The mechanical engineering consultant will be responsible for confirming the service lateral sizes and booster pump requirements at the building permit phase. The proposed functional water servicing for the site is shown on **Drawing SSP-1**.



## 4 Wastewater Servicing

### 4.1 Background

The 225 mm diameter concrete sanitary sewer in the Baseline Road ROW is the existing municipal sanitary sewer adjacent to the subject site. Sanitary sewer connections from the existing building will be capped and removed or abandoned, as required. The pre-consultation notes identified that the municipal sanitary sewer system on Baseline and Merivale are close to capacity due to significant redevelopment in the area. In the future, the City intends to construct the Merivale Sewer Extension and upsize the Baseline sanitary sewer. The two phases of this development are intended to facilitate the sequencing of construction to align with the available sewer capacities.

### 4.2 Design Criteria

As outlined in the City of Ottawa Sewer Design Guidelines and the MECP's Design Guidelines for Sewage Works, the following criteria were used to calculate the estimated wastewater flow rates, and to determine the size and location of the sanitary service lateral:

- Minimum velocity = 0.6 m/s (0.8 m/s for upstream sections)
- Maximum velocity = 3.0 m/s
- Manning roughness coefficient for all smooth wall pipes = 0.013
- Minimum size of sanitary sewer service = 135 mm
- Minimum grade of sanitary sewer service = 1.0% (2.0% preferred)
- Average residential wastewater generation = 280 L/person/day
- Average commercial wastewater generation = 28,000 L/gross ha/day
- Peak Factor = based on Harmon Equation; maximum of 4.0 (residential)
- Harmon correction factor = 0.8
- Infiltration allowance = 0.33 L/s/ha (per City Design Guidelines)
- Minimum cover for sewer service connections – 2.0 m
- Population density for bachelor and one-bedroom apartments – 1.4 persons/apartment
- Population density for two-bedroom apartments – 2.1 persons/apartment
- Population density for three-bedroom apartments – 3.1 persons/apartment

### 4.3 Wastewater Generation

The estimated wastewater flows to be generated are based on the phasing shown on the current site plan and the site statistics as shown in **Table 1.1**. For a conservative estimate of the Phase 1 peak sanitary flows, it was assumed that the infiltration from all the landscaped areas (including parkland) were attributed to the Phase 1 sewer lateral. For a conservative estimate of the peak commercial flows, the sanitary flow rates were calculated based on the gross developable Phasing areas rather than the Commercial floor areas listed in the site statistics. The parkland area, road widening, and rear access lane areas were excluded from the gross developable areas. Gross developable area for Phase 1 is 0.55ha and for Phase 2 is 0.47ha.



The anticipated wastewater peak flow generated from the proposed development is summarized in **Table 4.1** while the sanitary sewer design sheet is included in **Appendix C.1**. Note that due to rounding, some of the subtotals in **Table 4.1** may appear to be incorrect.

*Table 4.1: Estimated Wastewater Peak Flow*

<b>Building</b>	<b>Population</b>	<b>Peak Factor</b>	<b>Residential Peak Flow (L/s)</b>	<b>Commercial Peak Flow (L/s)</b>	<b>Infiltration Flow (L/s)</b>	<b>Total Peak Flow (L/s)</b>
Building A	735	3.31	7.9	0.1	0.1	8.1
Building B	590	3.35	6.4	0.1	0.1	6.6
<b>Phase 1</b>	<b>1,325</b>	<b>-</b>	<b>14.3</b>	<b>0.3</b>	<b>0.2</b>	<b>14.6</b>
Building C	468	3.39	5.1	0.2	0.1	5.4
Building D	667	3.33	7.2	0.2	0.1	7.4
<b>Phase 2</b>	<b>1,135</b>	<b>-</b>	<b>12.3</b>	<b>0.3</b>	<b>0.2</b>	<b>12.8</b>
<b>Total</b>	<b>2,460</b>	<b>-</b>	<b>26.6</b>	<b>0.6</b>	<b>0.4</b>	<b>27.4</b>

The total anticipated peak flows were calculated to be 14.6 L/s for Phase 1 and 12.8 L/s for Phase 2. Correspondence with the City of Ottawa project manager, provided in **Appendix C.2**, established that the existing sanitary sewer in Baseline Road has the capacity to accept a peak sanitary design flow of 18 L/s. Consequently, there are no concerns for sanitary sewer capacity to proceed with Phase 1 of the development. The Merivale Sanitary Sewer Extension, and the Baseline sanitary sewer upsize will need to be completed prior to Phase 2 of this development.

It is our understanding that the current submission, for 28 L/s will have a holding provision for 18 L/s implemented until the Merivale Sewer Extension is constructed. The Baseline sanitary sewer upsizing will be advanced for the Phase 2 detailed design.

## **4.4 Proposed Servicing**

Each phase of the proposed development will be serviced by a new 150 mm diameter sanitary service lateral, flowing by gravity, connected to the existing 225 mm diameter sanitary main on Baseline Road. A backwater valve is to be installed on the proposed sanitary service within the building to prevent any surcharge from the downstream sanitary sewer from impacting the proposed property. Each sanitary service lateral is also to have a monitoring manhole, installed within the site near the property line.



## 5 Stormwater Management and Servicing

### 5.1 Objectives

The goal of this functional stormwater servicing and stormwater management (SWM) plan is to determine the measures necessary to control the quantity and quality of stormwater released from the proposed development to meet the criteria established during the consultation process with City of Ottawa and to provide sufficient details required for ZBLA approval.

### 5.2 Stormwater Management (SWM) Criteria and Constraints

SWM criteria were established using the City of Ottawa Sewer Design Guidelines (SDG) and through pre-consultation with City of Ottawa. The following summarizes the list of criteria applicable to the stormwater servicing design of the site, with the source of each criterion indicated in parentheses:

#### General

- Use the dual drainage principle (SDG).
- Wherever feasible and practical, site-level measures should be used to reduce and control the volume and rate of runoff (SDG).

#### Storm Sewer & Inlet Controls

- Maximum discharge rates for the site under all storm events are to be restricted to the maximum runoff resulting from a pre-development 2-year storm event (Pre-Consultation).
- The pre-development runoff coefficient shall be calculated. The lower of the calculated existing coefficient or a maximum equivalent 'C' of 0.5, whichever is less, shall be used to establish the pre-development target release rate (Pre-Consultation).
- A calculated time of concentration cannot be less than 10 minutes (Pre-Consultation).
- Runoff coefficient values shall be increased by 25% for the post-development 100-year storm event (SDG).
- Stormwater discharge from the site will be directed to the existing 375 mm dia. reinforced concrete storm sewer within Baseline Road (Pre-Consultation).
- This site is anticipated to have quality control requirements for 80% total suspended solids (TSS) removal based on the City of Ottawa's existing CLI ECA (Pre-Consultation).

#### Surface Storage & Overland Flow

- A 15cm vertical clearance is necessary between the spill elevation and the ground elevation at the building envelope that is in proximity of the flow route or ponding area (SDG).
- Maximum depth of flow under either static or dynamic conditions shall be less than 0.30 m (SDG).
- Provide adequate emergency overflow conveyance off-site (SDG).



## 5.3 Existing Conditions

Based on the subcatchment areas delineated in the Existing Storm Drainage Plan (**Drawing EXSD-1**), the pre-development imperviousness of the proposed development area is calculated at 50% (C=0.55). Under existing conditions, there are no controls in place to manage stormwater runoff and all runoff from the site boundary drains uncontrolled to the existing adjacent drainage systems.

## 5.4 Stormwater Management Design

The Modified Rational Method (MRM) is employed to assess the rate and volume of runoff anticipated during post-development rainfall runoff events with on-site detention storage. Based on the preliminary site servicing plan and grading plan (Drawings **SSP-1** and **GP-1**), post-development drainage area boundaries are defined, and runoff coefficient values are then assigned to each drainage area based on the anticipated finished surface condition (e.g. asphalt, concrete, gravel, grass, etc.). **Drawing SD-1** illustrates the proposed post-development storm drainage conditions. Runoff coefficients for each surface types are assigned based on City of Ottawa SDG and accepted practices. A summary of drainage areas and runoff coefficients are provided in **Table 5.1**. Further details can be found in the MRM analysis included in **Appendix D.1**.

*Table 5.1: Summary of Post-Development Drainage Areas*

Catchment Areas	Runoff Coefficient C	Area (ha)	Catchment Type <sup>1</sup>	Outlet
ROOF-A	0.90	0.11	Tributary	375 mm Storm Sewer (Baseline Road ROW)
ROOF-B	0.90	0.10	Tributary	375 mm Storm Sewer (Baseline Road ROW)
ROOF-CD	0.90	0.24	Tributary	375 mm Storm Sewer (Baseline Road ROW)
WEST	0.75	0.36	Tributary	375 mm Storm Sewer (Baseline Road ROW)
EAST	0.65	0.31	Tributary	375 mm Storm Sewer (Baseline Road ROW)
PARK	0.30	0.12	Tributary	375 mm Storm Sewer (Baseline Road ROW)
UNC-1	0.70	0.08	Non-Tributary	Baseline Road ROW

1. Catchment Type refers to the nature of the catchment's outlet. Tributary catchments contribute to the onsite stormwater management systems.

Flows from the dedicated Parkland area, which is ultimately to be conveyed to the City, will be excluded from the SWM design. Only the total *developable* site area (1.2 ha, C=0.86) will be considered for the storage and release rate calculations. Development of this area as parkland is anticipated to reduce the imperviousness and runoff coefficient for the area compared to the existing conditions.



### 5.4.1 Allowable Release Rate

The peak post-development release rate from the subject site is to be limited to the 2-year pre-development event. The existing pre-development C value was calculated to be 0.55. Consequently, a pre-development runoff coefficient of 0.5 was utilized in the analysis to establish the allowable release rate.

The allowable target release rate for the site (2-year pre-development flow rate) has been determined using the rational method and a time of concentration for the pre-development area of 10 minutes. The runoff coefficient values have been increased by 25% for the post-development 100-year storm event as per the City of Ottawa SDG. The peak flow rate has been calculated using the rational method as follows. The target release rates for the developable site area are identified in **Table 5.2**.

$$Q = 2.78 (C)(I)(A)$$

Where:

$Q$  = peak flow rate, L/s

$C$  = site runoff coefficient

$I$  = rainfall intensity, mm/hr (per City of Ottawa IDF curves)

$A$  = drainage area, ha

$$\text{Intensity (mm/hr)} = \frac{732.951}{(10 + 6.199)^{0.810}} = 76.81 \text{ mm/hr}$$

$$Q = 2.78(0.50)(76.81 \text{ mm/hr})(1.2 \text{ ha}) = \mathbf{127.7 \text{ L/s}}$$

Table 5.2: Allowable Target Release Rate

2- Year Design Storm	Pre-development Flow Rate (L/s) For C=0.5, Tc=10 min
Phase 1 (0.56 ha)	47.5
Phase 2 (0.55 ha)	44.2
Overall (1.2 ha)	127.7

#### 5.4.1.1 Uncontrolled Areas

Grading restrictions along the site's southern perimeter, it is proposed that this catchment area (UNC-1) continue to drain uncontrolled towards the Baseline Road ROW per existing conditions. Peak discharges from the area are calculated using the Rational Method (RM) approach and are summarized in **Table 5.3**.



*Table 5.3: Peak Post-Development Discharge of Area UNC-1*

Design Storm	UNC-1
2-Year	12.4
100-Year	36.0

The proposed uncontrolled runoff condition from UNC-1 (0.08 ha) is considered an improvement over the existing drainage conditions.

### 5.4.2 Quantity Control

The overall post-development imperviousness of the developable site area, determined by the calculated runoff coefficients, is greater than the pre-development imperviousness. Quantity control measures are needed to manage stormwater runoff onsite to restrict the release rate to the allowable target. It is proposed that a combination of detention storage types (e.g. rooftop, surface, and underground cisterns) is used to reduce the site's peak outflow rates.

An MRM spreadsheet approach is used to determine the storage volumes required for this functional design. The MRM calculations consider the target allowable release rates, and the runoff coefficients associated with the proposed post-development catchments. The MRM calculations used to establish the storage volumes are provided in **Appendix D.1** and the storm sewer design sheet is provided in **Appendix D.2**.

A total storage volume of 334 m<sup>3</sup> is required to reduce the peak flows from the developable areas of the site to meet the target discharge rate of 127.7 L/s. The proposed functional stormwater management plan provides adequate attenuation in each phase to meet the target release rate for the 2- and 100-year storm events as shown in **Table 5.4**.

*Table 5.4: Estimated Post-Development Discharge*

Area Type	2-Year (L/s)	100-Year (L/s)	Required Storage (m <sup>3</sup> )	Storage Proposed (m <sup>3</sup> )	Overall Target (L/s)
Uncontrolled	12.4	36.0	-	-	127.7
Controlled Phase 1	47.5	47.5	172	175	
Controlled Phase 2	44.2	44.2	162	165	
<b>Total</b>	<b>104.1</b>	<b>127.7</b>	<b>334</b>	<b>340</b>	

Further details on the required storage volumes per phase and storage provided (e.g. rooftop, surface, underground) will be specified at the detailed design stage.



### 5.4.3 Quality Control

The development will be subject to quality control requirements due to the numerous drive aisles and short-term parking areas. Under the City’s existing CLI ECA, the stormwater released to the receiving municipal storm sewer should be treated to 80% TSS removal. The post-development drainage areas that are expected to be sources of contaminants (lane, driveway, and layby short-term parking spaces) are directed to the buildings’ internal stormwater systems for quantity control. Oil-grit- separator (OGS) units are proposed near the property line to provide the required quality control and to act as the stormwater monitoring manholes for the services.

Best management practices should be implemented throughout the site to minimize sources of erosion and sediment during construction and post-development conditions. Erosion and sediment mitigation measures will be explicated at the detailed design stage.

## 5.5 Results

**Table 5.5** provides a summary of the peak design discharge rates from the MRM analysis based on the proposed functional SWM plan. The functional design assumes that the onsite storage will be mechanically pumped at a constant release rate, hence the controlled 2-year discharge rates are equal to the 100-year discharge rates. As the table demonstrates, the site’s SWM design adheres to the target peak outflow rates.

*Table 5.5: Summary of Total 2-Year and 100-Year Event Release Rates*

Discharge Type	2-Year Discharge (L/s)	100-Year Discharge (L/s)
Uncontrolled	12.4	36.0
Phase 1 Controlled	47.5	47.5
Phase 2 Controlled	44.2	44.2
Total	104.1	127.7
<b>Target</b>	<b>127.7</b>	<b>127.7</b>
Parkland <sup>1</sup>	5.1	14.8

1. Parkland to be conveyed to the City and runoff controlled independently from the proposed development.

## 5.6 Proposed Stormwater Servicing

Each phase of the site, and the parkland area will be serviced by a 300 mm diameter storm service lateral. Both service connections are to the 375 mm diameter municipal storm sewer in Baseline Road. The phase 1 and parkland connections will require new manholes to be installed in the municipal sewer. The phase 2 lateral connects to an existing manhole. The outgoing pipe from the existing manhole is a 600mm diameter sewer.



## 1345 Baseline Road

### 5 Stormwater Management and Servicing

The two building storm services will each include an OGS unit that will have the dual function of quality control and to act as the stormwater monitoring manhole. A design sheet confirming the adequacy of the preliminary storm service sizing is included in **Appendix D.2**.

Stormwater storage infrastructure (e.g. cistern, rooftop storage, etc.) with a minimum storage volume of **175m<sup>3</sup> for Phase 1** and **165m<sup>3</sup> for Phase 2** will be provided onsite and discharge from the proposed development at controlled flow rates of **47.5 L/s** and **44.2 L/s**, respectively. The final sizing and layout of the infrastructure, including the method(s) of flow attenuation, for each phase shall be confirmed at detailed design. See **Drawings SSP-1** and **SD-1** for the proposed preliminary locations of the stormwater infrastructure.

Foundation drains will be provided for the Phase 1 and Phase 2 underground parking structures and will outlet to the storm service laterals. Sump pits and pumps will be required for all foundation drain systems.

There are five existing catch basins within the Baseline Road ROW that will need to be relocated for the proposed road widening works. Storm area drains, catch basins, catch basin lead locations and alignments, and final locations for the relocated existing catch basins in the Baseline Road ROW will be determined at the detailed design phase.

The mechanical engineering consultant will be responsible to confirm service sizes to each building and ensure that the appropriate backwater valve requirements are satisfied within the building. The mechanical engineering consultant will also design any roof drainage systems (including roof drainage scuppers and plumbing), sump pits/pumps, cistern pumps, and cistern emergency overflow drains, as required. The structural engineering consultant will be responsible for the design of any stormwater management cisterns required within the building. The structural and mechanical engineering designs will be required at subsequent phases (detailed design and building permit).



## 6 Site Grading and Drainage

The proposed development site measures approximately 1.32 ha in area. The existing site topography is generally flat but maintains gentle slopes within the existing grassed portion and asphalt parking areas. The average site grade is 100.75 m and generally drains toward the south with overland flow directed to the adjacent Baseline Road right-of-way.

A functional grading plan (**Drawing GP-1**) has been provided to satisfy stormwater management requirements, adhere to any geotechnical restrictions (see **Section 10.0**) for the site, and provide the minimum required cover for storm and sanitary sewers where possible. Site grading has been established to provide emergency overland flow routes required for stormwater management in accordance with City requirements.

## 7 Utilities

Hydro, gas, and cable servicing should be readily available for the development, as the site lies within a mature area with commercial and institutional buildings adjacent to the development. The existing building on the site is presumed to be currently serviced by all major utilities. The exact size, location, and routing of utilities, including determining whether off-site works are required to extend any additional utility services to the property, shall be coordinated by others at detailed design and building permit phases.



## 8 Approvals

The proposed development lies on a private site under singular ownership, drains to an approved separated sewer outlet, and is not intended to service industrial land or land uses. Therefore, the site is exempt from the Ministry of the Environment, Conservation and Parks (MECP) Environmental Compliance Application (ECA) process under O.Reg. 525/98).

As per the geotechnical report for the site, for typical ground or surface water volumes being pumped during the construction phase, typically between 50,000 to 400,000 L/day, it is required to register on the Environmental Activity and Sector Registry (EASR). A minimum of two to four weeks should be allotted for completion of the EASR registration and the preparation of the Water Taking and Discharge Plan by a Qualified Person as stipulated under O.Reg. 63/16. A Permit to Take Water (PTTW) through the MECP would be required for dewatering volumes exceeding 400,000 L/day, which may be required for this project. However, if a PTTW is required, at least 4 to 5 months should be allowed for completion of the application and issuance of the permit by the MECP.

Please refer to the geotechnical report for further discussion regarding potential construction limitations due to the site conditions.



## 9 Erosion Control during Construction

To protect downstream water quality and prevent sediment buildup in catch basins and storm sewers, erosion and sediment control measures must be implemented during construction. The following recommendations will be included in the contract documents and communicated to the Contractor.

1. Implement best management practices to provide appropriate protection of the existing and proposed drainage system and the receiving water course(s).
2. Limit the extent of the exposed soils at any given time.
3. Re-vegetate exposed areas as soon as possible.
4. Minimize the area to be cleared and grubbed.
5. Protect exposed slopes with geotextiles, geogrid, or synthetic mulches.
6. Provide sediment traps and basins during dewatering works.
7. Install sediment traps (such as SiltSack® by Terrafix) between catch basins and frames.
8. Schedule the construction works at times which avoid flooding due to seasonal rains.

The Contractor will also be required to complete inspections and guarantee the proper performance of their erosion and sediment control measures at least after every rainfall. The inspections are to include:

- Verification that water is not flowing under silt barriers.
- Cleaning and changing the sediment traps placed on catch basins.

An erosion and sediment control plan drawing will be developed at the detailed design phase.



## 10 Geotechnical Investigation and Environmental Assessment

### 10.1 Geotechnical Investigation

A geotechnical investigation report was prepared by Paterson Group Inc. on March 15, 2022, regarding the existing soil conditions within the subject area and construction recommendations. For details which are not summarized below, please see the report in its entirety in the submission package.

Subsurface soil conditions within the subject area were determined from five (5) boreholes advanced within the proposed site. The subsurface profile consisted of pavement underlain by 0.5 to 1.0 m of fill. The fill consisted of granular crushed stone to brown silty sand with crushed stone. Bedrock was encountered at depths of 1.0 to 1.2 m below the existing ground surface consisting of grey limestone. The bedrock within the proposed development area consists of interbedded limestone and dolomite of the Gull River formation. The report classifies the bedrock as being of good to excellent in quality.

The groundwater level, measured on March 3, 2022, at the monitoring well installed at borehole BH 2-22, was found to be 2.63 m below ground surface (geodetic elevation: 97.84 m). According to the geotechnical investigation, the long-term groundwater table can be expected approximately 2.6 m below the ground surface within the bedrock, however, these levels are subject to seasonal fluctuations and could vary at the time of construction.

Removal of bedrock will be required to complete the underground parking levels and to install the proposed building foundations. The investigation found that the in-situ bedrock was generally suitable to support the proposed building using conventional spread footings placed on clean, surface sounded bedrock. Bedrock removal will be required to complete the underground levels of the proposed development and can likely be removed by hoe-ramming and using conventional excavation methods. Recommendations are provided in the geotechnical report for the drainage of the footings and building slab. These components will form part of the building design. A single outlet for the foundation drains and building stormwater systems is proposed as part of the functional site servicing design as shown on **Drawing SSP-1** and described in **Section 5.6**.

### 10.2 Environmental Site Assessment (ESA)

A Phase I Environmental Site Assessment (ESA) was completed for the site by Paterson Group Inc in general accordance with Ontario Regulation 153/04, as amended under the Environmental Protection Act, and complies with the requirements of CSA Z768-01. The Phase I ESA specified that no environmental concerns were identified with respect to the current use of the subject site and that a Phase II ESA will not be required.

The report identifies hazardous substances that may be present in the existing structure based on the age of the building. Lead-based paints and asbestos containing building materials may be present, however, do not represent an immediate concern to the occupants of the building. Prior to demolition, the appropriate surveys should be conducted in accordance with Ontario Regulations. For details which are not summarized above, please see the report in the submission package.



## **11 Conclusion**

The functional site servicing and stormwater management plans presented in this report have demonstrated that the proposed phasing of the development can be adequately serviced in support of the ZBLA approval. Municipal stormwater and water services available in the Baseline Road ROW are adequate to support the full build-out of the 1345 Baseline Road redevelopment. A holding provision for 18 L/s peak sanitary sewer discharge will be implemented until the Merivale Sewer Extension is constructed. Phase 1 of the development will be acceptable to the peak of 18 L/s. The Baseline sanitary sewer will require upsizing to be reviewed and approved through the development application for Phase 2.



## Appendix A Background

### A.1 Draft Site Plan





PROJECT INFORMATION		
Zoning By-law: 2008-250 Consolidation	AMS [436]	SITE AREA (PURCHASED) 13,158.6 m <sup>2</sup> / 141,638 ft <sup>2</sup>
		ROW PROTECTION 829.3 m <sup>2</sup> / 8,927 ft <sup>2</sup>
		SITE AREA (DEVELOPABLE) 12,329.3 m <sup>2</sup> / 132,711 ft <sup>2</sup>
<b>ZONING</b>	<b>REQUIRED</b>	<b>PROVIDED</b>
ZONING	AMS [436]	
DENSITY - THE CUMULATIVE TOTAL GFA MUST NOT EXCEED (MAXIMUM)	1.26 = 15,550m <sup>2</sup>	7.20 = 86,363.2 m <sup>2</sup>
BUILDING HEIGHT	BUILDING 'A' 25.0m	40 STOREYS / 125.0m
	BUILDING 'B' 25.0m	34 STOREYS / 107.0m
	BUILDING 'C' 25.0m	28 STOREYS / 89.0m
	BUILDING 'D' 25.0m	34 STOREYS / 107.0m
TOWER FOOTPRINT (GUIDELINE ONLY) NOT INCLUDES BALCONIES	750m <sup>2</sup>	787m <sup>2</sup>
TOWER SEPARATION (GUIDELINE ONLY)	23.0m	23.2m
FRONT YARD SETBACK	0.0m	17.2m
INTERIOR SIDE YARD SETBACK (WEST & EAST SIDE)	0.0m	1.8m / 6.5m
REAR YARD SETBACK (MIXED USE BUILDING)	7.5m	13.2m
PARKLAND SETBACK (ABOVE GRADE ONLY)	3.0m	5.0m
TOTAL RESIDENTIAL UNIT COUNT	1,251	1,251
PARKING - RESIDENTIAL (AFTER 12 UNITS PER BLDG.) - 0.5 PER UNIT	602	814
PARKING - VISITOR ONLY (AFTER 12 UNITS PER BLDG.) - 0.2 PER UNIT; MAX. 30 PER	113	113
PARKING - COMMERCIAL (VARIES WITH USE) - 1.25 TO 10.0 PER 100m <sup>2</sup> GFA	12 - 80	24
PARKING - RESIDENTIAL MAXIMUM: 1.75 PER UNIT	2,189	n/a
PARKING - COMMERCIAL RETAIL ONLY MAXIMUM: 3.6 PER 100m <sup>2</sup> GFA	34	n/a
BICYCLE PARKING - RESIDENTIAL - 0.5 PER UNIT	631	631
BICYCLE PARKING - COMMERCIAL - 1 PER 250m <sup>2</sup> GFA	5	5
aisle & DRIVEWAY MINIMUM / MAXIMUM WIDTH	6.0m / 6.7m	6.0m / 6.7m
AMENITY AREA - TOTAL PER UNIT - 6.0m <sup>2</sup>	7,506m <sup>2</sup>	10,640m <sup>2</sup>
AMENITY AREA - 50% COMMUNAL PER UNIT - 3.0m <sup>2</sup>	3,753m <sup>2</sup>	6,940m <sup>2</sup>
PARKLAND DEDICATION AREA - 10% LOT AREA	1,232m <sup>2</sup>	1,148m <sup>2</sup>
<b>CAR PARKING</b>	<b>AREA 'A'</b>	<b>BUILDING STATISTICS</b>
<b>MINIMUM REQUIRED</b>		<b>BUILDING 'A' - 40 Storeys</b>
RESIDENCE (AFTER 12 UNITS) - 0.5 PER DWELLING UNIT	602	GROSS BUILDING AREA 24,807.3 m <sup>2</sup> / 267,024 ft <sup>2</sup>
VISITOR (AFTER 12 UNITS) - 0.1 PER DWELLING UNIT	113	GROSS BUILDING AREA (GFA IS BASED ON 75% CONSTRUCTION AREA) 342,538 ft <sup>2</sup> / 31,804.2 m <sup>2</sup>
COMM. USE (UNITS OVER 350m <sup>2</sup> ) - 1.25 TO 10.0 PER 100m <sup>2</sup> GFA	24	TOWER FOOTPRINT 787.0 m <sup>2</sup> / 8,467 ft <sup>2</sup>
TOTAL	739	UNIT COUNT 370
<b>MAXIMUM PERMITTED</b>		VEHICLE PARKING 270
RESIDENCE + VISITOR - 1.75 PER DWELLING UNIT	2,189	BICYCLE PARKING 187
COMM. USE - 3.6 PER 100m <sup>2</sup> GFA	34	COMMERCIAL AREA 257.0 m <sup>2</sup> / 2,770 ft <sup>2</sup>
TOTAL	2,223	
<b>PROVIDED</b>		<b>BUILDING 'B' - 34 Storeys</b>
RESIDENCE - 0.63 PER DWELLING UNIT	790	GROSS BUILDING AREA 20,553.0 m <sup>2</sup> / 221,231 ft <sup>2</sup>
VISITOR - 0.2 PER DWELLING UNIT	113	GROSS BUILDING AREA (GFA IS BASED ON 75% CONSTRUCTION AREA) 283,620 ft <sup>2</sup> / 26,350.0 m <sup>2</sup>
COMM. USE - 2.5 TO 10 PER 100m <sup>2</sup> GFA	14	TOWER FOOTPRINT 788.0 m <sup>2</sup> / 8,267 ft <sup>2</sup>
TOTAL	927	UNIT COUNT 307
<b>LOCATION</b>		VEHICLE PARKING 178
BUILDING 'A' U/G GARAGE	270	BICYCLE PARKING 157
BUILDING 'B' U/G GARAGE	178	COMMERCIAL AREA 680.8 m <sup>2</sup> / 7,328 ft <sup>2</sup>
BUILDING 'C' U/G GARAGE	205	
BUILDING 'D' U/G GARAGE	274	<b>BUILDING 'C' - 28 Storeys</b>
SURFACE PARKING	0	TOTAL BUILDING AREA 21,929.4 m <sup>2</sup> / 236,046 ft <sup>2</sup>
TOTAL	952	GROSS BUILDING AREA (GFA IS BASED ON 75% CONSTRUCTION AREA) 184,116 ft <sup>2</sup> / 17,104.9 m <sup>2</sup>
<b>BICYCLE PARKING</b>		TOWER FOOTPRINT 788.0 m <sup>2</sup> / 8,267 ft <sup>2</sup>
<b>REQUIRED</b>		UNIT COUNT 244
RESIDENCE - 0.5 PER UNIT	626	VEHICLE PARKING - RESIDENTIAL ONLY 205
COMMERCIAL - 1 PER 250m <sup>2</sup> GFA (938 m <sup>2</sup> )	5	BICYCLE PARKING 122
TOTAL	631	
<b>PROVIDED</b>		<b>BUILDING 'D' - 34 Storeys</b>
RESIDENCE - 0.5 PER UNIT	626	TOTAL AREA (GFA IS BASED ON 75% CONSTRUCTION AREA) 30,638.4 m <sup>2</sup> / 330,799 ft <sup>2</sup>
COMMERCIAL	10	TOWER FOOTPRINT 787.0 m <sup>2</sup> / 8,467 ft <sup>2</sup>
SHORT TERM AT GRADE	14	UNIT COUNT 234
TOTAL	650	VEHICLE PARKING - RESIDENTIAL ONLY 370
<b>AMENITY SPACE</b>		BICYCLE PARKING 165
PHASE 1 BUILDING 'A' PRIVATE BALCONIES =	1,800 m <sup>2</sup>	
PHASE 1 BUILDING 'A' COMMUNAL INTERIOR =	1,000 m <sup>2</sup>	<b>BUILDING AREA</b>
PHASE 2 BUILDING 'C' PRIVATE BALCONIES =	200 m <sup>2</sup>	CITY OF OTTAWA ZONING AREA (GFA IS BASED ON 75% CONSTRUCTION AREA)
PHASE 2 BUILDING 'C' COMMUNAL INTERIOR =	2,700 m <sup>2</sup>	BUILDING 'A' 24,807.3 m <sup>2</sup> / 267,024 ft <sup>2</sup>
PHASE 2 BUILDING 'C' COMMUNAL EXTERIOR =	1,500 m <sup>2</sup>	BUILDING 'B' 20,553.0 m <sup>2</sup> / 221,231 ft <sup>2</sup>
PHASE 2 BUILDING 'D' PRIVATE BALCONIES =	1,500 m <sup>2</sup>	BUILDING 'C' 17,104.9 m <sup>2</sup> / 184,116 ft <sup>2</sup>
PHASE 2 BUILDING 'D' COMMUNAL INTERIOR =	1,300 m <sup>2</sup>	BUILDING 'D' 23,898.0 m <sup>2</sup> / 257,235 ft <sup>2</sup>
PHASE 3 BUILDING 'B' PRIVATE BALCONIES =	200 m <sup>2</sup>	UNIT COUNT 1,251
PHASE 3 BUILDING 'B' COMMUNAL INTERIOR =	1,300 m <sup>2</sup>	TOTAL AREA ABOVE GRADE 110,722.0 m <sup>2</sup> / 1,197,802 ft <sup>2</sup>
PHASE 3 BUILDING 'B' COMMUNAL EXTERIOR =	100 m <sup>2</sup>	TOTAL COMMUNAL = 6,940 m <sup>2</sup>
TOTAL =	10,640 m <sup>2</sup>	REQUIRED - 6.0m <sup>2</sup> PER UNIT (1,251) = 7,506 m <sup>2</sup>
TOTAL COMMUNAL =	6,940 m <sup>2</sup>	REQUIRED COMMUNAL @ 50% = 3,753 m <sup>2</sup>
<b>LOT COVERAGE</b>		
BUILDING FOOTPRINT 'A' =	1,865.8 m <sup>2</sup> 8.85%	
BUILDING FOOTPRINT 'B' =	985.4 m <sup>2</sup> 8.00%	
BUILDING FOOTPRINT 'C' =	1,003.2 m <sup>2</sup> 8.14%	
BUILDING FOOTPRINT 'D' =	1,510.0 m <sup>2</sup> 12.28%	
DRIVING SURFACE =	1,896.3 m <sup>2</sup> 15.72%	
LANDSCAPE SURFACE =	4,519.6 m <sup>2</sup> 36.61%	
POPS =	200.0 m <sup>2</sup> 1.62%	
PARKLAND DEDICATION =	1,109.0 m <sup>2</sup> 9.00%	
TOTAL =	12,329.3 m <sup>2</sup> 100.00%	
<b>LOT PHASING AREA</b>		
PHASE 1: BUILDING 'A' =	2,871.1 m <sup>2</sup> 24.12%	
PHASE 2: BUILDING 'C' & 'D' =	5,644.2 m <sup>2</sup> 45.85%	
PHASE 3: BUILDING 'B' =	2,604.7 m <sup>2</sup> 21.16%	
PARKLAND DEDICATION =	1,109.0 m <sup>2</sup> 9.00%	
TOTAL =	12,329.3 m <sup>2</sup> 100.00%	

**1 OVERALL SITE PLAN**  
SP-1  
SCALE: 1 : 250

PAPER SIZE: ISO\_B1 (707.00 x 1000.00 MM) PLOT DATE: Thursday, March 26, 2026 PLOT SCALE: 1:1 PEN STYLE: 0-RLA-MASTER-100%.ctb

<b>LANDSCAPE ARCHITECT</b> <b>FoTenn Consultants Inc.</b> 420 O'Connor Street Ottawa, ON Canada, K2P 1W4 Tel.: (613) 730-5709 Fax: (613) 730-1136 E-Mail: fountain@fotenn.com E-Mail: mitchell@fotenn.com	<b>GEOTECHNICAL ENGINEER</b> <b>Paterson group</b> 9 Auriga Drive Ottawa, Ontario Tel: (613) 730-5709 Tel: 613.226-7381 Email: sdennis@patersongroup.ca Email: npate@patersongroup.ca	<b>CIVIL ENGINEER</b> <b>Stantec</b> 300-1331 Clyde Avenue Nepean, ON K2C 3G4 Tel: (613) 722-4420 E-Mail: omar.elsafadi@stantec.com E-Mail: peter.moroz@stantec.com	<b>URBAN PLANNER</b> <b>FoTenn Consultants Inc.</b> 400-1331 Clyde Avenue Ottawa, ON Canada, K2P 1W4 Tel.: (613) 730-5709 Fax: (613) 730-1136 E-Mail: tremblay@fotenn.com E-Mail: mitchell@fotenn.com	<b>PROJECT DEVELOPER</b> <b>Bertone Development Corporation</b> 1285 Rue Hodge, Suite 200 Saint-Laurent, Quebec, H4N 2B6 Tel: (514) 747-1696 Cell: (514) 952-3383 Email: mbertone@bertone.ca
<b>WIND / SOUND ENGINEER</b> <b>Gradient Wind</b> 127 Walgreen Road, Ottawa, ON, Canada K0A 1L0 Tel.: (613) 836-0934 ext. 116 Cell: (343) 643-0026 E-Mail: david.huitema@gradientwind.com E-Mail: joshua.foster@gradientwind.com	<b>TRANSPORTATION ENGINEER</b> <b>Stantec Geomatics Ltd.</b> 400-1331 Clyde Avenue Nepean, ON K2C 3G4 Tel: (613) 722-4420 E-Mail: stantec.com www.stantec.com	<b>SURVEYOR</b> <b>Stantec Geomatics Ltd.</b> 400-1331 Clyde Avenue Nepean, ON K2C 3G4 Tel: (613) 722-4420 E-Mail: stantec.com www.stantec.com	<b>LEGAL DESCRIPTION</b> PLAN OF SURVEY OF PART OF LOT 'N' CONCESSION 'A' (GEOGRAPHIC TOWNSHIP OF NEPEAN) CITY OF OTTAWA Stantec Geomatics Ltd. ONTARIO LAND SURVEYORS	<b>CONSTRUCTION MANAGER</b> <b>Vuze Construction</b> Street, City Quebec, ###-### Tel: (819) 664-1195 Email: mchenier@vuzeconstruction.com

**BERTONE**

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t. 613.724.9932 f. 613.724.1209 rla@architecture.ca

**1345 BASELINE ROAD**

OTTAWA ONTARIO

**SITE PLAN**  
**ULTIMATE CONDITION**

DRAWN: R.V. CHECKED: K.R.  
SCALE: 1:250 SHEET No.  
PROJECT No: 2505 **SP-1**

DWG #

D07-12-25-

## A.2 Pre-Consultation



**1345 Baseline**  
Meeting Summary Notes  
March 9, 2022, Online Teams Meeting

**Attendees:**

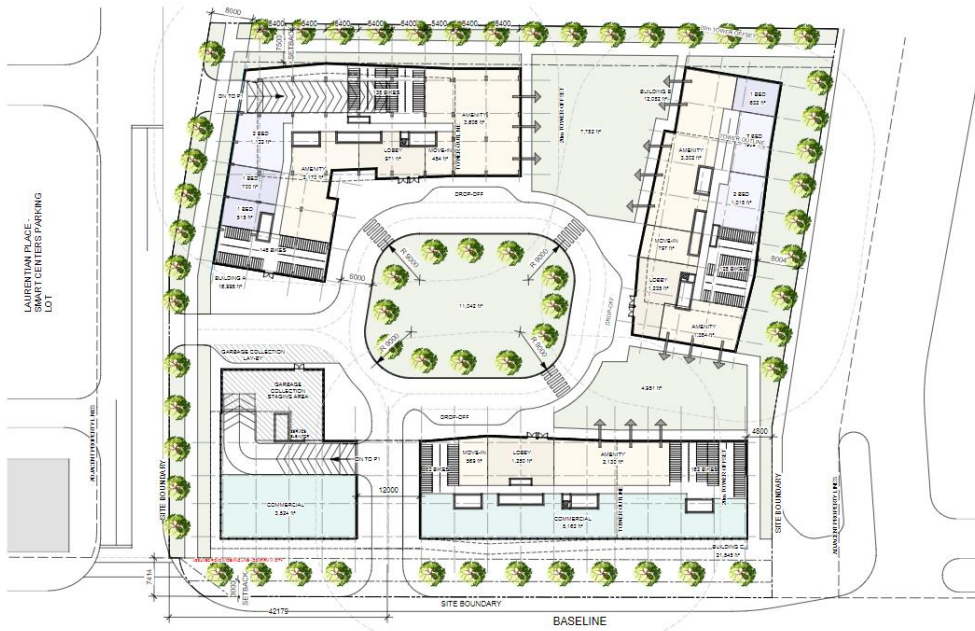
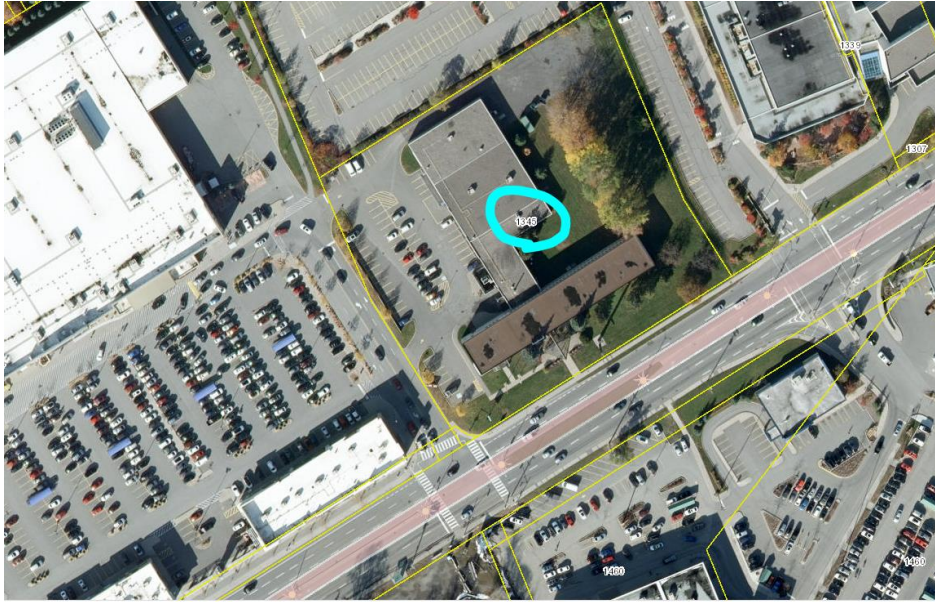
- Jeff Schaffhauser, Owner Scouts Canada
- Aaron Clodd, Colliers, Applicant
- Kevin Reid, RLA architects Consultant
- Peter Moroz, Stantec
- Dave Lashley, Landscape architect
- Barrett Wagar, Planner, Stantec
- Nancy Meloshe Planner, Stantec
  
- Josiane Gervais (Transportation Project Manager, City of Ottawa)
- Bruce Bramah (Project Manager, City of Ottawa)
- Selma Hassan (Urban Designer, City of Ottawa)
- Burl (Parks Planner, City of Ottawa)
- Aamani Sidhu, Planning Student
- Tracey Scaramozzino (File Lead, Planner, City of Ottawa)

**Unable to Attend:**

- Mark Richardson, Forestry Planner
- Sami Rehman, Environmental Planner
- Eric Lalande, RVCA

**Issue of Discussion:**

- Proposed Rezoning to permit 3 high-rise, mixed-use towers with 8,686 sf of ground retail, 1014 residential units, 612 u/g vehicle parking spaces (0.6 ratio), 846 Bicycle storage spaces (0.83 ratio) and 107,328 sf of amenity space.
- Proposed heights are 32, 28 and 24 storeys are below the height restrictions for the Ottawa International Airport
- Property will likely be sold by Scouts Canada once the new zoning is in effect
- A site plan would be submitted in the future by the new owner.



**1. Current Official Plan - designated "Arterial Mainstreet".**

- a. Site is located within 400m of future BRT station at Baseline and Clyde Ave and is permitted 9-storeys as of right, but high-rises can be contemplated through ZBLA when community amenity is provided and with proper transitioning to lower-rise bldgs.

**2. New Draft Official Plan, Approved by Council, Oct 27, 2021, Pending Approval from the Province in June 2022**

- a. Outer Urban Transect, Mainstreet corridor, evolving neighbourhood,
- b. Hi-rise are permitted when within 400m transit.

**3. Zoning Information: AM5[436]**

**4. Infrastructure/Servicing (Bruce Bramah):**

**Water:**

Connection point: 406mm CI on Baseline

Water redundancy would be required for this development based on the number of proposed units.

- Watermain Frontage Fees to be paid (\$190.00 per metre)  Yes  No

**Boundary conditions:**

Civil consultant must request boundary conditions from the City's assigned Project Manager prior to submission.

- Water boundary condition requests must include the location of the service(s) and the expected loads required by the proposed developments. Please provide all the following information:
  - Location of service(s)
  - Type of development and the amount of fire flow required (as per FUS, 1999).
  - Average daily demand: \_\_\_ l/s.
  - Maximum daily demand: \_\_\_ l/s.
  - Maximum hourly daily demand: \_\_\_ l/s.
- Fire protection (Fire demand, Hydrant Locations)

**Sanitary Sewers:**

Connection point: 225mm concrete on Baseline

Is a monitoring manhole required on private property?  Yes  No

- The designer should be aware there may be limited capacity in the downstream sanitary sewer system. The sanitary demand needs to be coordinated with the City Planning Dept. to determine if the existing sanitary sewer system has sufficient capacity to support the proposed rezoning. Provide sanitary demands to the City project manager for coordination.

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**Storm Sewers:**

Connection point: 375mm concrete on Baseline

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**Storm Water Management:**

Quality Control:

- Rideau Valley Conservation Authority to provide quality control requirements for property.

#### Quantity Control:

- Allowable Runoff coefficient (C): C = the lesser of the existing pre-development conditions to a maximum of 0.5.
  - Time of concentration (Tc): Tc = pre-development; maximum Tc = 10 min
  - Allowable flowrate: Control the 100-year/5-year storm events to the existing 2-year storm event.
- 

### **Ministry of Environment, Conservation and Parks (MECEP)**

All development applications should be considered for an Environmental Compliance Approval, under MECP regulations.

- a. The consultants determine if an approval for sewage works under Section 53 of OWRA is required and determines what type of application. The City's project manager may help confirm and coordinate with the MECP as required.
- b. The project will be either transfer of review (standard), transfer of review (additional), direct submission, or exempt as per O. Reg. 525/98.
- c. Pre-consultation is not required if applying for standard or additional works (Schedule A of the Agreement) under Transfer Review.
- d. Pre-consultation with local District office of MECP is recommended for direct submission.
- e. Consultant completes an MECP request form for a pre-consultation. Sends request to [moeccottawasewage@ontario.ca](mailto:moeccottawasewage@ontario.ca)
- f. [ECA applications are required to be submitted online through the MECP portal. A business account required to submit ECA application. For more information visit <https://www.ontario.ca/page/environmental-compliance-approval>](#)
- g. [It is unclear if the proposed development will remain as one property. An ECA will be required where the stormwater management services more than one property parcel.](#)

**NOTE: Site Plan Approval, or Draft Approval, is required before any Ministry of the Environment and Climate Change (MOECC) application is sent.**

#### **General Service Design Comments**

- The City of Ottawa requests that all new services be located within the existing service trench to minimize necessary road cuts.
- Monitoring manholes should be located within the property near the property line in an accessible location to City forces and free from obstruction (i.e. not a parking).
- Where service length is greater than 30 m between the building and the first maintenance hole / connection, a cleanout is required.
- The City of Ottawa Standard Detail Drawings should be referenced where possible for all work within the Public Right-of-Way.
- The upstream and downstream manhole top of grate and invert elevations are required for all new sewer connections.

Services crossing the existing watermain or sewers need to clearly provide the obvert/invert elevations to demonstrate minimum separation distances. A watermain crossing table may be provided.

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## 5. Initial Planning Comments

- a. Discuss proposal with local Councillor and Community Associations
- b. Ensure ample greenspace/useable amenity space
- c. What community amenity is proposed to support the extra ht? This should be discussed with the local Councillor. This must be over and above the parkland which is a standard requirement.
- d. This development will also be subject to the Community Benefits Charge or Section 37.
- e. Provide confirmation from NAVCanada that the hts are acceptable
- f. Within Design Priority Area – UDRP req'd
- g. Are there any ped connection opportunities to outside of the site? North??
- h. Are you reducing parking? It is permitted in the new OP – if they are reduced, it would allow more space along boundary for trees
- i. Will they apply once the new OP is approved? Should be by end of June.
- j. It would be nice to incorporate the totem pole, as it is a landmark in this area.
- k. Overhang for pedestrians along Baseline is nice

## 6. Urban Design Comments (Selma Hassan):

### Design Brief, UDRP and Design Guidelines

1. The applicant is required to submit a Design Brief that addresses all of the items highlighted in the attached Terms of Reference.
2. The site is located within a Design Priority Area and the proposal is, therefore, required to be reviewed by the City's Urban Design Review Panel.
3. The plan is subject to both City of Ottawa Guidelines for High-rise Buildings and Arterial Mainstreets. The applicant's Design Brief must demonstrate that the requirements of the guidelines have been met.

### Built Form

4. The applicant is proposing three towers on the site. The parking lot to the north is likely to redevelop at some point in the future and sits between the site and existing ground-oriented residential. For us to properly assess the appropriateness of the applicant's submission, we would like to understand the potential build out of the parking lot to the north. We request that the applicant model the build out scenario, including potential building heights, as well as vehicular and pedestrian connections.
5. It is not clear that tower separation requirements are met along the north and east property edges. The tower to the north-west, in particular, appears to be less than 10m from the property line. Could the applicant clearly dimension the 10m setback from the north and east property lines?

6. We would like the applicant to consider orienting the north-west tower so that its long façade faced north-south (narrow end facing rear parking lot). Would this be an optimal orientation, in particular given the potential future redevelopment of the rear parking lot?
7. As the building design evolves, it will be important that the towers are clearly residential in character and do not read as office buildings.
8. As per the Urban Design Guidelines for High-rise Buildings, careful consideration of the massing of both individual buildings and of groups of buildings on a site, the interface with the public realm, as well as of the design building base, middle, top is critical.
9. Attention the design and character of the streetwall along Baseline Road is important
  - Distinct and prominent principal entries on Baseline are important for both the commercial and residential components of the building.
  - The proposed building on Baseline is long. The façade should be visually broken down.
  - Both the architecture and landscape treatment along Baseline should contribute to a coherent and continuous streetscape.

### **Parkland and Tree Planting**

10. As note by the RCFS Parks Planner in the pre-consultation meeting, parkland is required for this site. Urban Design agrees that an unencumbered public park must front onto Baseline Road, as Baseline is the only public street.
  - The Council approved new Official Plan and the Council approved Parks and Recreation Master Plan both identify the requirement to take land as a priority where development sites would generate parkland dedication of at least 400m<sup>2</sup>. The Parks and Recreation Master Plan also identifies a city-wide target of 2.0ha of active parkland per 1,000 people. As shown on Map 2 of the Parks and Recreation Facilities Master Plan, this area of Baseline Road currently does not meet the city-wide target. Multiple development sites in this area of Baseline Road will add many more people; the proposal for 1345 Baseline Road includes approximately 1,000 units itself. Parkland is required.
  - In terms of orientation, the applicant could consider a shorter park frontage on Baseline Road and a deeper park block.
  - Zoning setbacks will be required from the park property line to any building frontages. Building design and location of windows, ground floor uses, projections, building shadows, wind effects and access for exterior maintenance and repairs, all impact the dimension of a required setback.
11. The trees planted in front of the Smart Centres site have not done well. The applicant is asked to provide tree planting details and demonstrate how the proposed trees in the ROW will achieve their growth potential.
12. Similarly, the applicant is asked to show the footprint of below grade parking garage in relation to the proposed trees and to demonstrate that trees can achieve their growth potential. What are the proposed soil volumes, planting depths and structural supports given the underground parking garage? The

applicant is asked to explore shrinking the footprint of the below grade parking so that the trees do not sit on top of the parking structure.

### **Circulation**

13. We are pleased to see that the existing pedestrian pathway on the east side of Walmart, that leads from the residential neighbourhood, has been extended to Baseline Road.
14. Is the pathway at the north end of site open to public access? Who is the expected user? How will the pathway related to future development to the north?

## **7. Parks (Burl Walker):**

### **Parkland Dedication Requirement**

1. The applicant should verify the lot area. The application form describes a lot area of 11,550 m<sup>2</sup>. However, the property report on geoOttawa indicates that the lot area is 13,156 m<sup>2</sup>.
2. The New Official Plan designates the site as a Hub with an overlapping Mainstreet Corridor designation. It is noted that there is no existing parkland within the Hub / Mainstreet Corridor designation for the segment of Baseline Road between Clyde Avenue and Merivale Road. Celebration Park, which is approximately 500m from the site, is the only park within walking distance of the subject property.
3. Under Policy 4.4.1(2) of the New Official Plan, the City shall prioritize land for parks over cash-in-lieu of parkland for sites that generate a requirement for more than 400 square metres of parkland. Cash-in-lieu of parkland dedication shall only be accepted when land or location are not suitable. For Site Plan Control applications in the Downtown, Inner Urban, Outer Urban and Suburban Transects, Policy 4.4.1(3) indicates that where the development site is more than 4,000 square metres, the City shall place a priority on acquisition of land for parks as per the Planning Act and the Parkland Dedication By-law. The site is situated in the Outer Urban Transect and exceeds 4,000 square metres in size. Accordingly, Parks and Facilities Planning will be seeking all of the parkland dedication requirement for the future site plan application in the form of parkland conveyance. The land to be conveyed shall be:
  - Be free of encumbrances above and below ground (including the underground parking garage);
  - Be of a usable shape, topography and size that reflects its intended use;
  - Meet applicable provincial soil regulations; and
  - Meet the minimum standards for drainage, grading and general condition.
4. Please note that Parks and Facilities Planning is currently undertaking a legislated review for the replacement of the City's Parkland Dedication By-law, with the new By-law to be considered by City Council in early July 2022. To

ensure the applicant is aware of any potential parkland dedication requirements for the proposed development, we encourage the applicant to familiarize themselves with the existing Parkland Dedication By-law and to sign up for project notifications on the Engage Ottawa project page or by emailing the project lead at [Kersten.Nitsche@ottawa.ca](mailto:Kersten.Nitsche@ottawa.ca).

- The Planning Rationale to be submitted with the Zoning By-law Amendment application should include a calculation of the parkland dedication requirement for the proposed development based on the provisions of the Parkland Dedication By-law, the actual lot area and the proposed gross floor area of the commercial and apartment uses. If the new By-law comes into effect prior to the submission of the application, the Planning Rationale should address the provisions of the new By-law.

To provide interim guidance until the new Parkland Dedication By-law comes into effect, the proposed development was reviewed in the context of the existing Parkland Dedication By-law. A high-level preliminary estimate of the parkland dedication requirement based on the available information in the pre-application submission and the current By-law provisions is shown in the table below. The final parkland dedication requirement will be based on the future Site Plan Control application submission(s) and the new By-law.

Item	Description	Value	Unit	Comment
<b>INPUT VARIABLES</b>				
Site	Area of Site Being Developed	13,156	m <sup>2</sup>	Area based on geoOttawa property report
Residential	Proposed Units	1,014		As per application form
	Existing Units	-		
	Proposed Residential GFA	771,624	ft <sup>2</sup>	780,310 ft <sup>2</sup> GFA shown on concept plan less 8,686 ft <sup>2</sup> commercial
Commercial	Proposed Commercial GFA	8,686	ft <sup>2</sup>	As per application form
<b>CALCULATION</b>				
1. Area Ratio	Residential	98.9%		
	Commercial	1.11%		
2. Residential	Parkland Dedication Requirement	1,301	m <sup>2</sup>	1 ha per 300 dwelling units to a maximum of 10% of the area of the site being developed
3. Commercial	Parkland Dedication Requirement	-	m <sup>2</sup>	No parkland dedication required for a change of an existing commercial use to another commercial use
4. Total	Parkland Dedication Requirement	1,301	m <sup>2</sup>	

- If the applicant can demonstrate that parkland dedication or cash-in-lieu of parkland dedication was previously provided for the site, the parkland dedication requirement would need to be adjusted to take this into account.
- Based on the calculations above and the current Parkland Dedication By-law provisions, a park with an area of 1,301 m<sup>2</sup> would need to be conveyed to the City through the future Site Plan Control application.
- The park area correspond with an urban parkette or plaza. Note that Policy 4.4.4(1)(b) of the New Official Plan indicates that urban parkettes and plazas are intended to be provided in Hubs and Corridors in the Outer Urban and Suburban

Transects to provide central gathering spaces and recreational components and to complement larger parks.

### **Park Location**

9. The initial preference from Parks and Facilities Planning is to locate the park block at the southwest corner of the site adjacent to Baseline Road and the proposed north-south sidewalk extension connecting to the Central Park neighbourhood. Note that the north-south sidewalk should not be included within the park block. The southeast corner of the site adjacent to Baseline Road is an alternative location that could also be considered for the park.
10. Please review if the right-in, right-out driveway on Baseline Road could be situated so that it is not located immediately adjacent to the park block.
11. Policy 4.4.6(1)(e) of the New Official Plan indicates that a preferred minimum of 50% of the park perimeter shall be continuous frontage on abutting streets. It will not be possible to achieve the preferred 50% minimum because there is only one public street, Baseline Road, that will be adjacent to the park. Staff would be open to considering a rectangular shaped park with the short side located along Baseline Road, which would increase the depth of the park block and allow part of the park amenity space to be situated further away from the traffic on Baseline Road. The park should not be overly narrow, though.
12. Vehicular access to the park block will be required for park maintenance. Access will likely need to be from a site driveway rather than from Baseline Road.
13. The concept plan to be submitted with the Zoning By-law Amendment application should identify the proposed location, area and dimensions of the park block.
14. The final park location, area and configuration would need to be acceptable to Parks and Facilities Planning. The Urban Design Review Panel may also provide comments on the park location and configuration.

### **Public Realm**

15. The park will form part of the overall public realm for the Hub designation in the New Official Plan. The design of the buildings and landscape surrounding the park should be informed by the following policies in the New Official Plan regarding the public realm:
  - Policy 6.1.1
  - (3) Development within a Hub:
    - (e) Shall create a high-quality, comfortable public realm throughout the Hub that prioritizes the needs of pedestrians, cyclists and transit users;
    - (f) Shall establish buildings that:
      - (i) Edge, define, address and enhance the public realm through building placement, entrances, fenestration, signage and building facade design;
      - (ii) Place principal entrances so as to prioritize convenient pedestrian access to the transit station and the public realm; and

- (ii) Place parking, loading, vehicle access, service entrances and similar facilities so as to minimize their impact on the public realm.

### **Zoning**

- 16. The park should be rezoned to "O1" (Parks and Open Space) through the Zoning By-law Amendment application.
- 17. Site-specific zoning provisions should be included in the Zoning By-law Amendment to provide acceptable setbacks between the proposed buildings and the lot lines of the future park to mitigate impacts such as shadows and wind from the proposed buildings.

### **Development Servicing Report**

- 18. The Development Servicing Report submitted with the Zoning By-law Amendment application should address the servicing issues and requirements for the park block.

### **Shadow Analysis**

- 19. The Terms of Reference for a Shadow Analysis include evaluation criteria for Public Spaces. The Shadow Analysis to be submitted with the Zoning By-law Amendment application will need to demonstrate that the park will satisfy the applicable criteria for Public Spaces (i.e. "The new net shadow must not result in an average of 50% of any public space being cast in shadow for 5 or more hourly interval times during the September test date only.")

### **Preliminary Wind Analysis**

- 20. The Preliminary Wind Analysis to be submitted with the Zoning By-law Amendment application should specifically address the wind impact of the proposed buildings on the park and include recommendations for any mitigation measures, if necessary.

### **Phase I and/or II Environmental Site Assessment**

- 21. The Phase I and/or II Environmental Site Assessment to be submitted with the Zoning By-law Amendment application should take into account the proposed park use and location in the assessment(s).

### **Future Site Plan Control Application**

- 22. A Record of Site Condition would be required prior to registration of the site plan agreement.
- 23. The conditions of site plan approval would require the Owner to convey the parkland to the City at the time of registration of the site plan agreement. The Owner would be responsible for retaining a land surveyor to prepare a draft reference plan describing the park parcel.
- 24. The conditions of site plan approval will require the Owner to provide services for the park. The services required would be confirmed during the Site Plan Control application review process. At a minimum, the park would require the following:
  - a. 300mm diameter storm sewer connection to a municipal storm sewer and CB/MH located 2m inside the park lot line
  - b. A 120/240 volt, 200 amperes single phase hydro service at 2m inside the park property line

25. The conditions of site plan approval will require the Owner to prepare the park block including removals, grading, and supplying and installing a minimum depth of 150mm of topsoil and seed or sod to City standards.
26. The Owner may be required to supply and install a minimum 1.5m high commercial grade chain link fence or approved equivalent along the park lot lines depending on the final location of the park block and the existing and proposed land use(s) adjacent to the park. An ornamental fence style may be appropriate for the park context to complement the architecture and landscape of the proposed development.
27. The City would take over the park block after the site works have been completed and the grassed areas in the park have been established to the satisfaction of the Public Works Department.
28. The City will be responsible for the future development of the park. The park development project would be identified for funding as part of a future update to the Development Charges Background Study and the Development Charges By-law.
29. The amenities for the park will be determined at a future date.

#### **Potential Draft Plan of Condominium Application**

If a future Draft Plan of Condominium application is submitted, the conditions of approval would typically include the requirement for the Owner to include a warning clause in all agreements of purchase and sale warning purchasers that the park may have lighting, active uses and/or other features.

### **8. Trees (Mark Richardson):**

#### **TCR requirements:**

1. a Tree Conservation Report (TCR) must be supplied for review along with the suite of other plans/reports required by the City
  - a. an approved TCR is a requirement of Site Plan approval.
  - b. The TCR may be combined with the LP provided all information is supplied
2. Any removal of privately-owned trees 10cm or larger in diameter, or city-owned trees of any diameter requires a tree permit issued under the Tree Protection Bylaw (Bylaw 2020 – 340); the permit will be based on an approved TCR and made available at or near plan approval.
3. The Planning Forester from Planning and Growth Management as well as foresters from Forestry Services will review the submitted TCR
  - a. If tree removal is required, both municipal and privately-owned trees will be addressed in a single permit issued through the Planning Forester
  - b. Compensation may be required for city owned trees – if so, it will need to be paid prior to the release of the tree permit

4. the TCR must list all trees on site, as well as off-site trees if the CRZ extends into the developed area, by species, diameter and health condition
5. please identify trees by ownership – private onsite, private on adjoining site, city owned, co-owned (trees on a property line)
6. If trees are to be removed, the TCR must clearly show where they are, and document the reason they cannot be retained
7. All retained trees must be shown, and all retained trees within the area impacted by the development process must be protected as per City guidelines available at [Tree Protection Specification](#) or by searching Ottawa.ca
  - a. the location of tree protection fencing must be shown on the plan
  - b. show the critical root zone of the retained trees
  - c. if excavation will occur within the critical root zone, please show the limits of excavation
8. the City encourages the retention of healthy trees; if possible, please seek opportunities for retention of trees that will contribute to the design/function of the site.
9. For more information on the process or help with tree retention options, contact Mark Richardson [mark.richardson@ottawa.ca](mailto:mark.richardson@ottawa.ca) or on [City of Ottawa](#)

#### **LP tree planting requirements:**

For additional information on the following please contact [adam.palmer@Ottawa.ca](mailto:adam.palmer@Ottawa.ca)

##### Minimum Setbacks

- Maintain 1.5m from sidewalk or MUP/cycle track.
- Maintain 2.5m from curb
- Coniferous species require a minimum 4.5m setback from curb, sidewalk or MUP/cycle track/pathway.
- Maintain 7.5m between large growing trees, and 4m between small growing trees. Park or open space planting should consider 10m spacing, except where otherwise approved in naturalization / afforestation areas. Adhere to Ottawa Hydro's planting guidelines (species and setbacks) when planting around overhead primary conductors.

##### Tree specifications

- Minimum stock size: 50mm tree caliper for deciduous, 200cm height for coniferous.
- Maximize the use of large deciduous species wherever possible to maximize future canopy coverage
- Tree planting on city property shall be in accordance with the City of Ottawa's Tree Planting Specification; and include watering and warranty as described in the specification (can be provided by Forestry Services).
- Plant native trees whenever possible
- No root barriers, dead-man anchor systems, or planters are permitted.

- No tree stakes unless necessary (and only 1 on the prevailing winds side of the tree)

Hard surface planting

- Curb style planter is highly recommended
- No grates are to be used and if guards are required, City of Ottawa standard (which can be provided) shall be used.
- Trees are to be planted at grade

Soil Volume

- Please ensure adequate soil volumes are met:

Tree Type/Size	Single Tree Soil Volume (m3)	Multiple Tree Soil Volume (m3/tree)
Ornamental	15	9
Columnar	15	9
Small	20	12
Medium	25	15
Large	30	18
Conifer	25	15

Please note that these soil volumes are not applicable in cases with Sensitive Marine Clay.

Sensitive Marine Clay

- Please follow the City’s 2017 Tree Planting in Sensitive Marine Clay guidelines

**Tree Canopy Cover**

- The landscape plan shall show how the proposed tree planting will replace and increase canopy cover on the site over time, to support the City’s 40% urban forest canopy cover target.
- At a site level, efforts shall be made to provide as much canopy cover as possible, through tree planting and tree retention, with an aim of 40% canopy cover at 40 years, as appropriate.
- Indicate on the plan the projected future canopy cover at 40 years for the site.

**9. Environment (Sami Rehman)**

- a. No concerns.

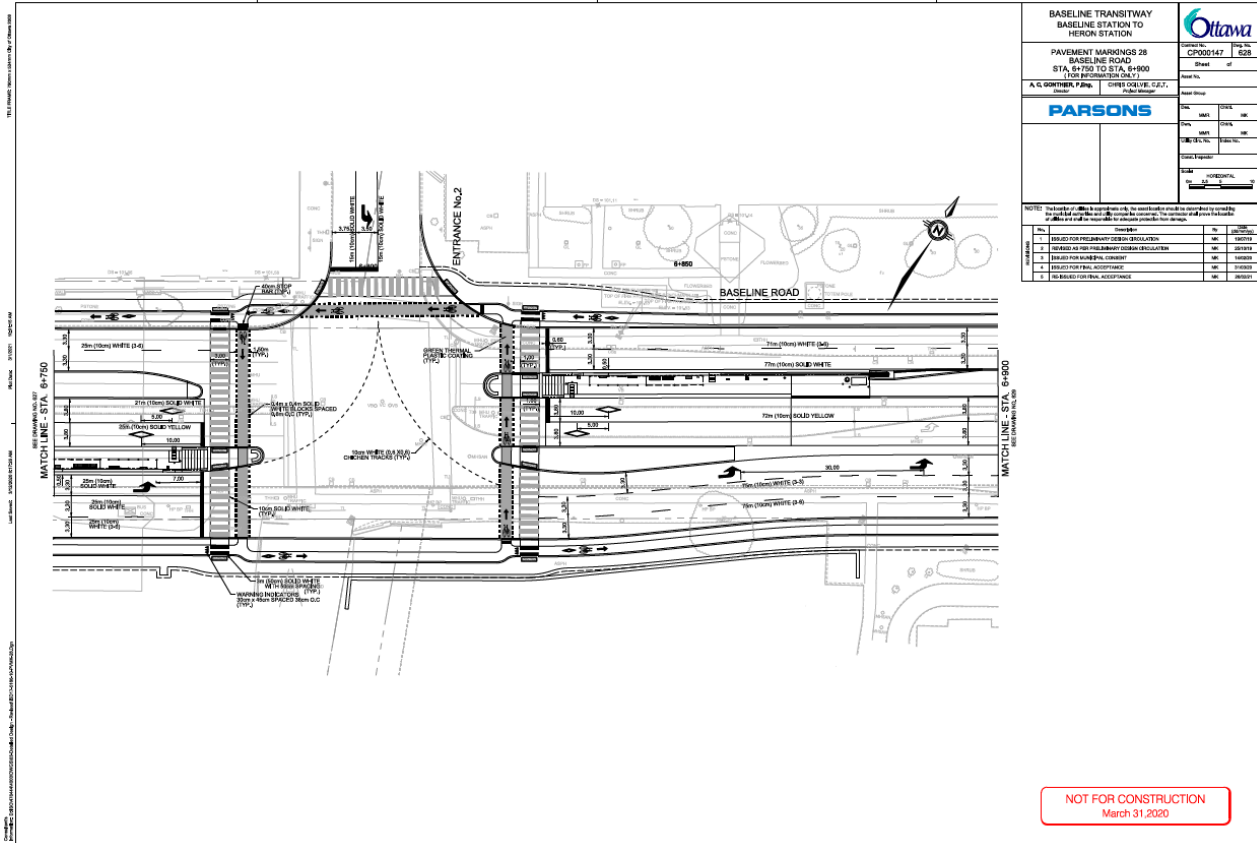
**10. Conservation Authority (RVCA - Eric Lalonde)**

- The RVCA has no concerns or objections. The RVCA would not have any additional stormwater quality requirements based on the overall site design but encourage the Applicant to implement best management practices where possible.

## 11. Transportation (Josiane Gervais):

- Follow Transportation Impact Assessment Guidelines:
  - A TIA is required. As this is a re-zoning application, the scope will be confirmed with Step 2.
  - Correct Screening Form, there is a proposed access within 150m of a traffic signal.
  - Start this process asap. The application will not be deemed complete until the submission of the draft step 1-4, including the functional draft RMA package (if applicable) and/or monitoring report (if applicable).
  - Request base mapping asap if RMA is required. Contact Engineering Services (<https://ottawa.ca/en/city-hall/planning-and-development/engineering-services>)
  - An update to the *TRANS Trip Generation Manual* has been completed (October 2020). This manual is to be utilized for this TIA. A copy of this document can be provided upon request.
- TMP includes:
  - BRT with At-Grade Crossings along Baseline (Affordable Network, Map 5)
  - Baseline Road as a Cross-town Bikeway (Map 1)
- ROW protection on Baseline Road between Greenbelt boundary and Prince of Wales is 44.5m even. Future ROW line must be shown on the concept plan (site plan), and all set-backs must be measured from this new property line. Note that additional ROW beyond what is identified in the OP is required to accommodate the BRT design. Please see included plan for BRT design, note that the Baseline BRT design is still subject to change.
- The following comments are related to a Site Plan application but are provided for information purposes:
  - Clear throat requirements for >200 apartments on an arterial is 40m. Ensure this length is provided. The clear throat length is measured from the ends of the driveway.  
curb return radii at the roadway and the point of first conflict on-site. Note the minimum throat length provided must be maintained with the future ROW protection.
  - Corner clearances are to follow minimum distances set out within TAC Figure 8.8.2. For this site, the access should be spaced between the two signals on Baseline to meet the corner clearances from both intersections (i.e. 70m distance).
  - As the proposed site is multi-use and for general public use, AODA legislation applies.
    - Ensure all crosswalks located internally on the site provide a TWSI at the depressed curb, per requirements of the Integrated Accessibility Standards Regulation under the AODA.
    - Clearly define accessible parking stalls and ensure they meet AODA standards (include an access aisle next to the parking stall and a pedestrian curb ramp at the end of the access aisle, as required).

- Please consider using the City's Accessibility Design Standards, which provide a summary of AODA requirements. <https://ottawa.ca/en/city-hall/creating-equal-inclusive-and-diverse-city/accessibility-services/accessibility-design-standards-features#accessibility-design-standards>
- Ensure site access meets the City's Private Approach Bylaw.
- Show all details of the roads abutting the site up to and including the opposite curb; include such items as pavement markings, accesses and/or sidewalks.
- Turning movement diagrams required for all accesses showing the largest vehicle to access/egress the site.
- Turning movement diagrams required for internal movements (loading areas, garbage).
- Show all curb radii measurements; ensure that all curb radii are reduced as much as possible and fall within TAC guidelines (Figure 8.5.1).
- Show dimensions for site elements (i.e. lane/aisle widths, access width and throat length, parking stalls, sidewalks, pedestrian pathways, etc.)
- Sidewalk is to be continuous across access as per City Specification 7.1.
- Show slope of garage ramps on site plan. Note that underground ramps should be limited to a 12% grade and must contain a subsurface melting device when exceeding 6%. Ramp grades greater than 15% can be psychological barriers to some drivers.
- Ensure all crosswalks located internally on the site provide a TWSI at the depressed curb, per requirements of the Integrated Accessibility Standards Regulation under the AODA.
- Parking stalls at the end of dead-end parking aisles require adequate turning around space
- Grey out any area that will not be impacted by this application.
- Because access is being provided via the private property at 1357 Baseline, a letter of support from the adjacent property owner is required and/or the easement should be shown on the plan.
- Road and Stationary Noise Impact Studies will be required.



<b>BASELINE TRANSITWAY</b> BASELINE STATION TO HERON STATION		
Project No. CP000147	Page No. 028	
<b>PAVEMENT MARKINGS 28</b> BASELINE ROAD STA. 6+750 TO STA. 6+900 (See Appendix 1 for Scale)		Sheet of
Author A. G. GORTNER, P.Eng.	Check CHEST OULVE, C.E.T., P.Eng.	Date 03/20/20
<b>PARSONS</b>		
Client City of Ottawa	Designer City of Ottawa	Scale 1:100
Date 03/20/20	Project Baseline Road	Status Final
Notes: 1. This drawing is for informational purposes only. It is not intended to be used for construction. It is subject to change without notice.		
No. 1 2 3 4 5	Description 1. BASELINE ROAD PAVEMENT MARKINGS 28 2. BASELINE ROAD PAVEMENT MARKINGS 28 3. BASELINE ROAD PAVEMENT MARKINGS 28 4. BASELINE ROAD PAVEMENT MARKINGS 28 5. BASELINE ROAD PAVEMENT MARKINGS 28	Date 03/20/20 03/20/20 03/20/20 03/20/20 03/20/20

## 12. Waste Collection

- a. Please see City's Waste Management Guidelines for multi-unit residential: - <http://ottawa.ca/calendar/ottawa/citycouncil/pec/2012/11-13/Solid%20Waste%20Collection%20Guidelines%20-%20Doc%201.pdf>

## 13. General Information

- a. Ensure that all plans and studies are prepared as per City guidelines – as available online... <https://ottawa.ca/en/city-hall/planning-and-development/information-developers/development-application-review-process/development-application-submission/guide-preparing-studies-and-plans>

## Appendix B Water Servicing

### B.1 Domestic Water Demands



**1345 Baseline Road, Ottawa, ON - Domestic Water Demand Estimates**

Site Plan provided by RLA Architecture.

Stantec Project No. 160402175

Designed by: MW

City File No. PC2025-0177

Date Created: 26-Mar-2026

Revision: 01

Checked by: AG

Date Checked: 13-Apr-2026



Population densities per Table 4.1 City of Ottawa Water Distribution Guidelines:		
Studio/1 Bedroom	1.4	ppu
2 Bedroom/ 1 Bedroom + Den	2.1	ppu
3 Bedroom/ 2 Bedroom + Den	3.1	ppu
Demand conversion factors per Table 4.2 of the City of Ottawa Water Design Guidelines and Technical Bulletin ISTB-2021-03:		
Residential	280	L/cap/day
Commercial	28000	L/gross ha/day

Unit Type	Gross Commercial Area (m <sup>2</sup> )	No. of Units	Population	Avg Day Demand		Max Day Demand <sup>1 2</sup>		Peak Hour Demand <sup>1 2</sup>	
				(L/min)	(L/s)	(L/min)	(L/s)	(L/min)	(L/s)
<b>Residential</b>									
<b>Building A</b>									
1 Bedroom		68	95	18.5	0.3	46.3	0.8	101.8	1.7
1 Bedroom + Den <sup>3</sup>		154	323	62.9	1.0	157.2	2.6	345.9	5.8
2 Bedroom		142	298	58.0	1.0	145.0	2.4	318.9	5.3
2 Bedroom + Den <sup>4</sup>		6	19	3.6	0.1	9.0	0.2	19.9	0.3
<i>Building A Subtotal</i>		370	735	143.0	2.4	357.5	6.0	786.5	13.1
<b>Building B</b>									
Studio		28	39	7.6	0.1	19.1	0.3	41.9	0.7
1 Bedroom		59	83	16.1	0.3	40.2	0.7	88.3	1.5
1 Bedroom + Den <sup>3</sup>		93	195	38.0	0.63	94.9	1.58	208.9	3.5
2 Bedroom		121	254	49.4	0.8	123.5	2.1	271.7	4.5
2 Bedroom + Den <sup>4</sup>		6	19	3.6	0.1	9.0	0.2	19.9	0.3
<i>Building B Subtotal</i>		307	590	114.7	1.9	286.7	4.8	630.8	10.5
<b>Building C</b>									
Studio		22	31	6.0	0.1	15.0	0.2	32.9	0.5
1 Bedroom		50	70	13.6	0.2	34.0	0.6	74.9	1.2
1 Bedroom + Den <sup>3</sup>		69	145	28.2	0.5	70.4	1.2	155.0	2.6
2 Bedroom		97	204	39.6	0.7	99.0	1.7	217.8	3.6
2 Bedroom + Den <sup>4</sup>		6	19	3.6	0.1	9.0	0.2	19.9	0.3
<i>Building C Subtotal</i>		244	468	91.0	1.5	227.5	3.8	500.5	8.3
<b>Building D</b>									
1 Bedroom		54	76	14.7	0.2	36.8	0.6	80.9	1.3
1 Bedroom + Den <sup>3</sup>		141	296	57.6	1.0	143.9	2.4	316.7	5.3
2 Bedroom		123	258	50.2	0.8	125.6	2.1	276.2	4.6
2 Bedroom + Den <sup>4</sup>		12	37	7.2	0.1	18.1	0.3	39.8	0.7
<i>Building D Subtotal</i>		330	667	129.7	2.2	324.3	5.4	713.5	11.9
<b>Gross Commercial<sup>5</sup></b>	12329			24.0	0.4	36.0	0.6	64.7	1.1
<i>PH1 Buildings A-B Subtotal</i>	6165	677	1325	257.7	4.3	644.2	10.7	1417.2	23.6
<i>PH 2 Buildings C-D Subtotal</i>	6165	574	1135	220.7	3.7	551.8	9.2	1214.0	20.2
<b>Phase 2 Total</b>	<b>12329</b>	<b>1251</b>	<b>2460</b>	<b>502.4</b>	<b>8.4</b>	<b>1232.0</b>	<b>20.5</b>	<b>2696.0</b>	<b>44.9</b>

**Notes:**

- The City of Ottawa water demand criteria used to estimate peak demand rates for residential areas are as follows (Water Distribution Design Guidelines, 2025, Table 4.2):  
 maximum day demand rate = 2.5 x average day demand rate  
 peak hour demand rate = 2.2 x maximum day demand rate
- Water demand criteria used to estimate peak demand rates for gross commercial area are as follows (Water Distribution Design Guidelines, 2025, Table 4.2):  
 maximum daily demand rate = 1.5 x average day demand rate  
 peak hour demand rate = 1.8 x maximum day demand rate
- Assumption that "1 bedroom with den" has density of 2.1 ppu.
- Assumption that "2 bedroom with den" has density of 3.1 ppu.
- Site developable area assumed for gross commercial area for conservative estimates.

## B.2 Fire Flow Demands





FUS Fire Flow Calculation Sheet - 2020 FUS Guidelines

Stantec Project #: 160402175  
 Project Name: 1345 Baseline Road  
 Date: 2026-04-09

Fire Flow Calculation #: 1

Description: Building A - 40-storey high-rise residential building with 4-storey podium

Notes: Based on site plan provided by RLA Architecture on March 26, 2026. Building footprint of 1040 m<sup>2</sup>, tower footprint of 787 m<sup>2</sup>.

Step	Task	Notes										Value Used	Req'd Fire Flow (L/min)
1	Determine Type of Construction	Type II - Noncombustible Construction / Type IV-A - Mass Timber Construction										0.8	-
2	Determine Effective Floor Area	Sum of Largest Floor + 25% of Two Additional Floors					Vertical Openings Protected?					YES	-
		1040	1040	1040	1040	787	787	787	787	787	787	1560	-
3	Determine Required Fire Flow	(F = 220 x C x A <sup>1/2</sup> ). Round to nearest 1000 L/min										-	7000
4	Determine Occupancy Charge	Limited Combustible										-15%	5950
5	Determine Sprinkler Reduction	Conforms to NFPA 13										-30%	-2975
		Standard Water Supply										-10%	
		Fully Supervised										-10%	
		% Coverage of Sprinkler System										100%	
6	Determine Increase for Exposures (Max. 75%)	Direction	Exposure Distance (m)	Exposed Length (m)	Exposed Height (Stories)	Length-Height Factor (m x stories)	Construction of Adjacent Wall	Firewall / Sprinklered ?				-	-
		North	20.1 to 30	33.7	34	> 100	Type I-II - Protected Openings	YES				0%	119
		East	> 30	10	2	0-20	Type V	NO				0%	
		South	> 30	30	2	41-60	Type V	NO				0%	
		West	20.1 to 30	28	1	21-49	Type V	NO				2%	
7	Determine Final Required Fire Flow	Total Required Fire Flow in L/min, Rounded to Nearest 1000L/min											3000
		Total Required Fire Flow in L/s											50.0
		Required Duration of Fire Flow (hrs)											1.25
		Required Volume of Fire Flow (m <sup>3</sup> )											225



FUS Fire Flow Calculation Sheet - 2020 FUS Guidelines

Stantec Project #: 160402175  
 Project Name: 1345 Baseline Road  
 Date: 2026-04-09

Fire Flow Calculation #: 2  
 Description: Building B - 34-storey high-rise residential building with 4-storey podium

Notes: Based on site plan provided by RLA Architecture on March 26, 2026. Building footprint of 976 m<sup>2</sup>, tower footprint of 768 m<sup>2</sup>.

Step	Task	Notes	Value Used	Req'd Fire Flow (L/min)						
1	Determine Type of Construction	Type II - Noncombustible Construction / Type IV-A - Mass Timber Construction	0.8	-						
2	Determine Effective Floor Area	Sum of Largest Floor + 25% of Two Additional Floors	Vertical Openings Protected?	YES						
		976    976    976    976    768    768    768    768    768	1464	-						
3	Determine Required Fire Flow	(F = 220 x C x A <sup>1/2</sup> ). Round to nearest 1000 L/min	-	7000						
4	Determine Occupancy Charge	Limited Combustible	-15%	5950						
5	Determine Sprinkler Reduction	Conforms to NFPA 13	-30%	-2975						
		Standard Water Supply	-10%							
		Fully Supervised	-10%							
		% Coverage of Sprinkler System	100%							
6	Determine Increase for Exposures (Max. 75%)	Direction	Exposure Distance (m)	Exposed Length (m)	Exposed Height (Stories)	Length-Height Factor (m x stories)	Construction of Adjacent Wall	Firewall / Sprinklered ?	-	-
		North	> 30	0	0	0-20	Type V	NO	0%	0
		East	20.1 to 30	23	28	> 100	Type I-II - Unprotected Openings	YES	0%	
		South	20.1 to 30	34	34	> 100	Type I-II - Unprotected Openings	YES	0%	
		West	> 30	0	0	0-20	Type V	NO	0%	
7	Determine Final Required Fire Flow	Total Required Fire Flow in L/min, Rounded to Nearest 1000L/min							3000	
		Total Required Fire Flow in L/s							50.0	
		Required Duration of Fire Flow (hrs)							1.25	
		Required Volume of Fire Flow (m <sup>3</sup> )							225	



FUS Fire Flow Calculation Sheet - 2020 FUS Guidelines

Stantec Project #: 160402175  
 Project Name: 1345 Baseline Road  
 Date: 2026-04-09

Fire Flow Calculation #: 3

Description: Buildings C and D - High-rise residential building with 6-storey podium and 28-storey and 34-storey high-rise towers

Notes: Based on site plan provided by RLA Architecture on March 26, 2026. Building footprint of 2,428 m<sup>2</sup> and combined tower footprint of 1536 m<sup>2</sup>.

Step	Task	Notes	Value Used	Req'd Fire Flow (L/min)						
1	Determine Type of Construction	Type II - Noncombustible Construction / Type IV-A - Mass Timber Construction	0.8	-						
2	Determine Effective Floor Area	Sum of Largest Floor + 25% of Two Additional Floors	Vertical Openings Protected?	YES	-					
		2428    2428    2428    2428    2428    2428    1536    1536    1536    1536	3642	-						
3	Determine Required Fire Flow	(F = 220 x C x A <sup>1/2</sup> ). Round to nearest 1000 L/min	-	11000						
4	Determine Occupancy Charge	Limited Combustible	-15%	9350						
5	Determine Sprinkler Reduction	Conforms to NFPA 13	-30%	-4675						
		Standard Water Supply	-10%							
		Fully Supervised	-10%							
		% Coverage of Sprinkler System	100%							
6	Determine Increase for Exposures (Max. 75%)	Direction	Exposure Distance (m)	Exposed Length (m)	Exposed Height (Stories)	Length-Height Factor (m x stories)	Construction of Adjacent Wall	Firewall / Sprinklered ?	-	-
		North	> 30	0	0	0-20	Type V	NO	0%	0
		East	> 30	0	0	0-20	Type V	NO	0%	
		South	> 30	0	0	0-20	Type V	NO	0%	
		West	20.1 to 30	23	28	> 100	Type I-II - Protected Openings	YES	0%	
7	Determine Final Required Fire Flow	Total Required Fire Flow in L/min, Rounded to Nearest 1000L/min							5000	
		Total Required Fire Flow in L/s							83.3	
		Required Duration of Fire Flow (hrs)							1.75	
		Required Volume of Fire Flow (m <sup>3</sup> )							525	

## B.3 Boundary Conditions



## Wu, Michael

---

**From:** Bramah, Bruce <bruce.bramah@ottawa.ca>  
**Sent:** April 29, 2026 11:02  
**To:** Wu, Michael  
**Cc:** Gladish, Alyssa; Moroz, Peter; Johnston, Anthony  
**Subject:** RE: PC2025-0177 - Updated Boundary Conditions Request - 1345 Baseline Road  
**Attachments:** 1345 Baseline Road April 2026.pdf

Hi Michael,

Please see the BC's below:

Buildings A-B (Connection 1):

Minimum HGL = 124.9 m

Maximum HGL = 133.0 m

MaxDay + FireFlow (50.0 L/s) = 129.2 m

MaxDay + FireFlow (167.0 L/s) = 127.3 m

Buildings C-D (Connection 2):

Minimum HGL = 124.8 m

Maximum HGL = 133.0 m

MaxDay + FireFlow (83.0 L/s) = 128.6 m

MaxDay + FireFlow (167.0 L/s) = 127.1 m

These are for current conditions and are based on computer model simulation.

*Disclaimer: The boundary condition information is based on current operation of the city water distribution system. The computer model simulation is based on the best information available at the time. The operation of the water distribution system can change on a regular basis, resulting in a variation in boundary conditions. The physical properties of watermains deteriorate over time, as such must be assumed in the absence of actual field test data. The variation in physical watermain properties can therefore alter the results of the computer model simulation.*

Thanks,

--

**Bruce Bramah, P.Eng**

Project Manager

Planning, Development and Building Services department (PDBS)/ Direction générale des services de la planification, de l'aménagement et du bâtiment (DGSPAB) - South Branch

City of Ottawa | Ville d'Ottawa

110 Laurier Avenue West Ottawa, ON | 110, avenue. Laurier Ouest. Ottawa (Ontario) K1P 1J1

613.580.2424 ext. 29686, [Bruce.Bramah@ottawa.ca](mailto:Bruce.Bramah@ottawa.ca)

Classified as City of Ottawa - Internal / Ville d'Ottawa - classé interne

---

**From:** Wu, Michael <Michael.Wu@stantec.com>

**Sent:** Wednesday, April 22, 2026 1:41 PM

**To:** Bramah, Bruce <bruce.bramah@ottawa.ca>

**Cc:** Gladish, Alyssa <alyssa.gladish@stantec.com>; Moroz, Peter <peter.moroz@stantec.com>; Johnston, Anthony <Anthony.Johnston@stantec.com>

**Subject:** RE: PC2025-0177 - Updated Boundary Conditions Request - 1345 Baseline Road

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Hi Bruce, as a quick follow up, could you provide a timeline on when we can expect the boundary conditions?

Thanks,

**Michael Wu**, EIT  
Civil Engineering Intern  
He, him



---

**From:** Bramah, Bruce <[bruce.bramah@ottawa.ca](mailto:bruce.bramah@ottawa.ca)>  
**Sent:** April 21, 2026 08:27  
**To:** Wu, Michael <[Michael.Wu@stantec.com](mailto:Michael.Wu@stantec.com)>  
**Cc:** Gladish, Alyssa <[Alyssa.Gladish@stantec.com](mailto:Alyssa.Gladish@stantec.com)>; Moroz, Peter <[peter.moroz@stantec.com](mailto:peter.moroz@stantec.com)>; Johnston, Anthony <[Anthony.Johnston@stantec.com](mailto:Anthony.Johnston@stantec.com)>  
**Subject:** RE: PC2025-0177 - Updated Boundary Conditions Request - 1345 Baseline Road

Hi Michael,

We will review this update with infrastructure services. I should have a response within 2 weeks.

Thanks,

--

**Bruce Bramah, P.Eng**  
Project Manager  
Planning, Development and Building Services department (PDBS)/ Direction générale des services de la planification, de l'aménagement et du bâtiment (DGSPAB) - South Branch  
City of Ottawa | Ville d'Ottawa  
110 Laurier Avenue West Ottawa, ON | 110, avenue. Laurier Ouest. Ottawa (Ontario) K1P 1J1  
613.580.2424 ext. 29686, [Bruce.Bramah@ottawa.ca](mailto:Bruce.Bramah@ottawa.ca)

Classified as City of Ottawa - Internal / Ville d'Ottawa - classé interne

---

**From:** Wu, Michael <[Michael.Wu@stantec.com](mailto:Michael.Wu@stantec.com)>  
**Sent:** Monday, April 20, 2026 3:06 PM  
**To:** Bramah, Bruce <[bruce.bramah@ottawa.ca](mailto:bruce.bramah@ottawa.ca)>  
**Cc:** Gladish, Alyssa <[alyssa.gladish@stantec.com](mailto:alyssa.gladish@stantec.com)>; Moroz, Peter <[peter.moroz@stantec.com](mailto:peter.moroz@stantec.com)>; Johnston, Anthony <[Anthony.Johnston@stantec.com](mailto:Anthony.Johnston@stantec.com)>  
**Subject:** RE: PC2025-0177 - Updated Boundary Conditions Request - 1345 Baseline Road

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Hi Bruce, the wastewater peak flows projected are around 8.1 L/s from Building A, 6.6 L/s from Building B (14.8 L/s total from Phase 1), 5.4 L/s from Building C, and 7.5 L/s from Building D (12.9 L/s total from Phase 2).

Attached is the sanitary design sheet for further information.

Please advise if you have any questions or require further information.

Thanks,

**Michael Wu**, EIT  
Civil Engineering Intern  
He, him



---

**From:** Bramah, Bruce <[bruce.bramah@ottawa.ca](mailto:bruce.bramah@ottawa.ca)>  
**Sent:** April 15, 2026 08:56  
**To:** Wu, Michael <[Michael.Wu@stantec.com](mailto:Michael.Wu@stantec.com)>  
**Cc:** Gladish, Alyssa <[Alyssa.Gladish@stantec.com](mailto:Alyssa.Gladish@stantec.com)>; Moroz, Peter <[peter.moroz@stantec.com](mailto:peter.moroz@stantec.com)>; Johnston, Anthony <[Anthony.Johnston@stantec.com](mailto:Anthony.Johnston@stantec.com)>  
**Subject:** RE: PC2025-0177 - Updated Boundary Conditions Request - 1345 Baseline Road

Hi Michael,

I will request an update for the boundary conditions. It looks like the proposed population count has increased significantly from our previous discussions. Please provide your design calculations for the peak sanitary flow.

Thanks,

--

**Bruce Bramah, P.Eng**

Project Manager

Planning, Development and Building Services department (PDBS)/ Direction générale des services de la planification, de l'aménagement et du bâtiment (DGSPAB) - South Branch

City of Ottawa | Ville d'Ottawa

110 Laurier Avenue West Ottawa, ON | 110, avenue. Laurier Ouest. Ottawa (Ontario) K1P 1J1

613.580.2424 ext. 29686, [Bruce.Bramah@ottawa.ca](mailto:Bruce.Bramah@ottawa.ca)

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---

**From:** Wu, Michael <[Michael.Wu@stantec.com](mailto:Michael.Wu@stantec.com)>  
**Sent:** Tuesday, April 14, 2026 5:28 PM  
**To:** Bramah, Bruce <[bruce.bramah@ottawa.ca](mailto:bruce.bramah@ottawa.ca)>  
**Cc:** Gladish, Alyssa <[alyssa.gladish@stantec.com](mailto:alyssa.gladish@stantec.com)>; Moroz, Peter <[peter.moroz@stantec.com](mailto:peter.moroz@stantec.com)>; Johnston, Anthony <[Anthony.Johnston@stantec.com](mailto:Anthony.Johnston@stantec.com)>  
**Subject:** PC2025-0177 - Updated Boundary Conditions Request - 1345 Baseline Road

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Good afternoon, Bruce:

We are requesting updated hydraulic boundary conditions from the 400 mm diameter watermain on Baseline Road, in support of a zoning by-law amendment (ZBLA) application for the proposed redevelopment at 1345 Baseline Road, which will see mixed-use development and two separate services servicing a total population of 2,460 persons and a gross area of 1.2 ha for commercial services.

The development is projected to be serviced from the 400 mm diameter watermain on Baseline Road, with the connection locations circled in **green** in the attached map. The water and fire flow demands for the development are as follows:

- Buildings A-B (Connection 1):
  - o Average Day Demands (AVDY): 4.3 L/s
  - o Maximum Day Demands (MXDY): 10.7 L/s
  - o Peak Hour Demands (PKHR): 23.6 L/s
  - o Fire Flow Demands: 50 L/s (3,000 L/min)
- Buildings C-D (Connection 2):
  - o Average Day Demands (AVDY): 3.7 L/s
  - o Maximum Day Demands (MXDY): 9.2 L/s
  - o Peak Hour Demands (PKHR): 20.2 L/s
  - o Fire Flow Demands: 83 L/s (5,000 L/min)
- Furthermore, we'd also like to request BC for a second scenario for both connections where the fire flow demands are 167 L/s (10,000 L/min)

Attached are the calculation sheets and the draft site plan for your reference.

We appreciate you taking the time to look into the matter, please let us know if you have any questions or require further information.

Thank you,

**Michael Wu**, EIT  
Civil Engineering Intern  
He, him

Direct: (613) 738 6033  
michael.wu@stantec.com



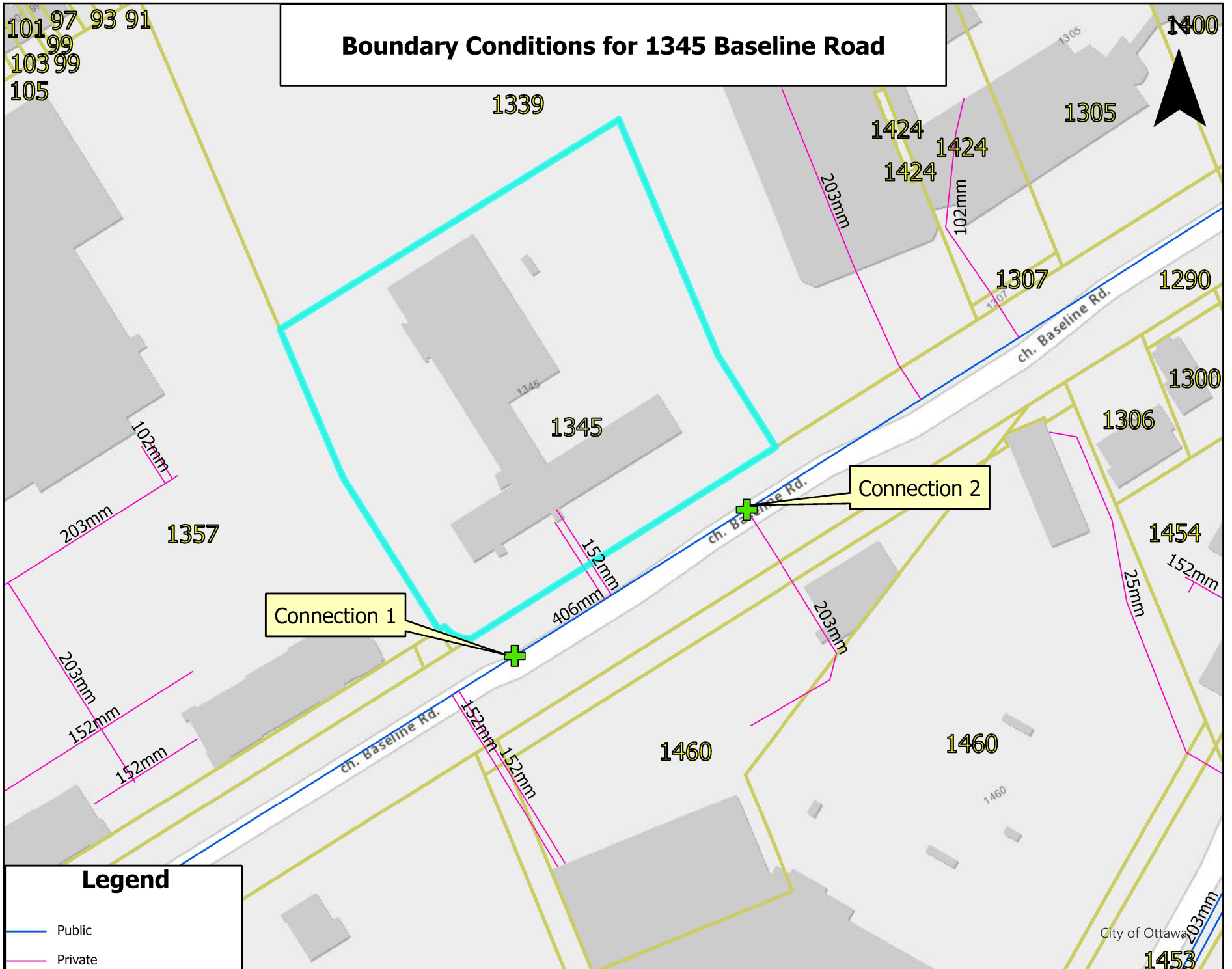
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# Boundary Conditions for 1345 Baseline Road



## Legend

- Public
- Private

## B.4 Fire Hydrant Coverage Table





Project:	<b>1345 Baseline Road</b>	160402175
<b>TABLE 1: FIRE HYDRANT COVERAGE TABLE</b>		
Revision: 01	Prepared By: MW	
Revision Date: 5/1/2026	Checked By: AG	

Description	Hydrants <sup>1</sup>			Total Available Fire Flow (L/min)	Total Required Fire Flow <sup>2</sup> (L/min)
	HYD-01	HYD-02	EX. SITE HYDRANT		
<b>Building A</b>					
Distance from building (m)	13.0	-	20.0	-	-
Maximum fire flow capacity <sup>3</sup> (L/min)	5,678	-	5,678	<b>11,356</b>	3,000
<b>Building B</b>					
Distance from building (m)	18.0	54.0	-	-	-
Maximum fire flow capacity <sup>3</sup> (L/min)	5,678	5,678	-	<b>11,356</b>	3,000
<b>Buildings C-D</b>					
Distance from building (m)	60.0	9.0	80.0	-	-
Maximum fire flow capacity <sup>3</sup> (L/min)	5,678	5,678	3,785	<b>15,141</b>	5,000

<b>NFPA 1 Table 18.5.4.3</b>	
Distance to Building (m)	Maximum Capacity (L/min)
<b>≤ 76</b>	<b>5,678</b>
<b>&gt; 76 and ≤ 152</b>	<b>3,785</b>
<b>&gt; 152 and ≤ 305</b>	<b>2,839</b>

Notes:

1. Hydrant locations and coverage as per Drawing SSP-1.
2. See FUS Calculations, Appendix B.2 for fire flow requirements.
3. See NFPA 1 Table 18.5.4.3 for maximum fire flow capacity of hydrants by distance to building.

## Appendix C Wastewater Servicing

### C.1 Sanitary Sewer Design Sheet





SUBDIVISION:  
**1345 Baseline Road**

DATE: 2026-05-07  
 REVISION: 1  
 DESIGNED BY: MW  
 CHECKED BY: AG  
 DATE CHECKED: 2026-04-20

**SANITARY SEWER  
 DESIGN SHEET  
 (City of Ottawa)**

FILE NUMBER: 160402175

**DESIGN PARAMETERS**

MAX PEAK FACTOR (RES.)=	4.0	AVG. DAILY FLOW / PERSON	280 l/p/day	MINIMUM VELOCITY	0.60 m/s
MIN PEAK FACTOR (RES.)=	2.0	COMMERCIAL	28,000 l/ha/day	MAXIMUM VELOCITY	3.00 m/s
PEAKING FACTOR (INDUSTRIAL):	2.4	INDUSTRIAL (HEAVY)	55,000 l/ha/day	MANNINGS n	0.013
PEAKING FACTOR (ICI >20%):	1.5	INDUSTRIAL (LIGHT)	35,000 l/ha/day	BEDDING CLASS	B
PERSONS / 1 BED	1.4	INSTITUTIONAL	28,000 l/ha/day	MINIMUM COVER	2.50 m
PERSONS / 2 BED	2.1	INFILTRATION	0.33 l/s/ha	HARMON CORRECTION FACTOR	0.8
PERSONS / 3 BED	3.1				

LOCATION			RESIDENTIAL AREA AND POPULATION								COMMERCIAL		INDUSTRIAL (L)		INDUSTRIAL (H)		INSTITUTIONAL		GREEN / UNUSED		C++I	INFILTRATION			TOTAL	PIPE									
AREA ID NUMBER	FROM M.H.	TO M.H.	AREA (ha)	1 BED	UNITS 2 BED	3 BED	POP.	CUMULATIVE AREA (ha)	POP.	PEAK FACT.	PEAK FLOW (l/s)	AREA (ha)	ACCU. AREA (ha)	AREA (ha)	ACCU. AREA (ha)	AREA (ha)	ACCU. AREA (ha)	AREA (ha)	ACCU. AREA (ha)	AREA (ha)	ACCU. AREA (ha)	PEAK FLOW (l/s)	TOTAL AREA (ha)	ACCU. AREA (ha)	INFILT. FLOW (l/s)	FLOW (l/s)	LENGTH (m)	DIA (mm)	MATERIAL	CLASS	SLOPE (%)	CAP. (FULL) (l/s)	CAP. V PEAK FLOW (%)	VEL. (FULL) (m/s)	
R3A, C3A	BLDG A	OUT	0.11	68	296	6	735	0.11	735	3.31	7.9	0.29	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.1	0.11	0.11	0.0	8.1									
R3B, C3B	BLDG B	OUT	0.10	87	214	6	590	0.10	590	3.35	6.4	0.28	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.1	0.10	0.10	0.0	6.6									
G3A, G3B, G3C	OUT	SAN 2						0.20	1325		14.3	0.00	0.58									0.3	0.87	1.07	0.4	14.6	1.5	200	PVC	SDR 35	1.00	33.4	43.75%	1.05	
	SAN 2	SAN 1						0.20	1325		14.3	0.00	0.58									0.3	0.87	1.07	0.4	14.6	27.7	200	PVC	SDR 35	1.00	33.4	43.75%	1.05	
R4A	BLDG C	OUT	0.24	72	166	6	468	0.24	468	3.39	5.1	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.2	0.24	0.24	0.1	5.4									
	BLDG D	OUT		54	264	12	667	0.24	667	3.33	7.2	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.2	0.00	0.24	0.1	7.4									
	OUT	SAN 4						0.49	1135		12.3	0.00	0.66									0.3	0.00	0.24	0.1	12.8	1.8	200	PVC	SDR 35	1.00	33.4	38.32%	1.05	
	SAN 4	SAN 3						0.49	1135		12.3	0.00	0.66									0.3	0.00	0.24	0.1	12.8	27.7	200	PVC	SDR 35	1.00	33.4	38.32%	1.05	

## C.2 Sanitary Sewer Capacity Correspondence



## Wu, Michael

---

**From:** Bramah, Bruce <bruce.bramah@ottawa.ca>  
**Sent:** May 7, 2026 14:04  
**To:** Wu, Michael  
**Cc:** Gladish, Alyssa; Moroz, Peter; Johnston, Anthony; Kelly, Siobhan  
**Subject:** RE: PC2025-0177 - Updated Boundary Conditions Request - 1345 Baseline Road

Good afternoon Michael,

There is significant redevelopment in the area resulting in the municipal sanitary sewers on Baseline and Merivale close to capacity. The previous submission was accepted based on a peak sanitary design flow of 18 L/s with the understanding the Merivale Sewer Extension is to be constructed. This put the Baseline sewer at capacity based on current development application allocations.

The updated peak sanitary sewer design of 28 L/s (Additional 10 L/s) would require the Baseline sanitary sewer to be upsized. Currently a CDP and associated MSS are being worked on which will include the Baseline sanitary sewer. The MSS will determine the required sanitary sizing for Baseline and is expected to be completed by end of June. The Baseline sewer upsizing will not be DC applicable and would be developer funded.

If a submission is made for 28 L/s, a holding provision for 18 L/s will be implemented until the Merivale Sewer Extension is constructed. The Baseline sewer upsizing will be reviewed and approved through the development application. . Phasing of the development will be acceptable to the peak of 18 L/s.

Happy to set up a meeting to discuss further if you have questions.

Thanks,

--

**Bruce Bramah, P.Eng**

Project Manager

Planning, Development and Building Services department (PDBS)/ Direction générale des services de la planification, de l'aménagement et du bâtiment (DGSPAB) - South Branch

City of Ottawa | Ville d'Ottawa

110 Laurier Avenue West Ottawa, ON | 110, avenue. Laurier Ouest. Ottawa (Ontario) K1P 1J1

613.580.2424 ext. 29686, [Bruce.Bramah@ottawa.ca](mailto:Bruce.Bramah@ottawa.ca)

Classified as City of Ottawa - Internal / Ville d'Ottawa - classé interne

---

**From:** Wu, Michael <Michael.Wu@stantec.com>  
**Sent:** Wednesday, May 6, 2026 11:04 AM  
**To:** Bramah, Bruce <bruce.bramah@ottawa.ca>  
**Cc:** Gladish, Alyssa <alyssa.gladish@stantec.com>; Moroz, Peter <peter.moroz@stantec.com>; Johnston, Anthony <Anthony.Johnston@stantec.com>  
**Subject:** RE: PC2025-0177 - Updated Boundary Conditions Request - 1345 Baseline Road

**CAUTION: This email originated from an External Sender. Please do not click links or open attachments unless you recognize the source.**

**ATTENTION : Ce courriel provient d'un expéditeur externe. Ne cliquez sur aucun lien et n'ouvrez pas de pièce jointe, excepté si vous connaissez l'expéditeur.**

Hi Bruce, as a quick follow-up, could you advise on when we could expect the updated confirmation on the sanitary peak flows per below?

Thanks,

**Michael Wu, EIT**  
Civil Engineering Intern  
He, him



---

**From:** Bramah, Bruce <[bruce.bramah@ottawa.ca](mailto:bruce.bramah@ottawa.ca)>  
**Sent:** April 21, 2026 08:27  
**To:** Wu, Michael <[Michael.Wu@stantec.com](mailto:Michael.Wu@stantec.com)>  
**Cc:** Gladish, Alyssa <[Alyssa.Gladish@stantec.com](mailto:Alyssa.Gladish@stantec.com)>; Moroz, Peter <[peter.moroz@stantec.com](mailto:peter.moroz@stantec.com)>; Johnston, Anthony <[Anthony.Johnston@stantec.com](mailto:Anthony.Johnston@stantec.com)>  
**Subject:** RE: PC2025-0177 - Updated Boundary Conditions Request - 1345 Baseline Road

Hi Michael,

We will review this update with infrastructure services. I should have a response within 2 weeks.  
Thanks,

--  
**Bruce Bramah, P.Eng**  
Project Manager  
Planning, Development and Building Services department (PDBS)/ Direction générale des services de la planification, de l'aménagement et du bâtiment (DGSPAB) - South Branch  
City of Ottawa | Ville d'Ottawa  
110 Laurier Avenue West Ottawa, ON | 110, avenue. Laurier Ouest. Ottawa (Ontario) K1P 1J1  
613.580.2424 ext. 29686, [Bruce.Bramah@ottawa.ca](mailto:Bruce.Bramah@ottawa.ca)

Classified as City of Ottawa - Internal / Ville d'Ottawa - classé interne

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**From:** Wu, Michael <[Michael.Wu@stantec.com](mailto:Michael.Wu@stantec.com)>  
**Sent:** Monday, April 20, 2026 3:06 PM  
**To:** Bramah, Bruce <[bruce.bramah@ottawa.ca](mailto:bruce.bramah@ottawa.ca)>  
**Cc:** Gladish, Alyssa <[alyssa.gladish@stantec.com](mailto:alyssa.gladish@stantec.com)>; Moroz, Peter <[peter.moroz@stantec.com](mailto:peter.moroz@stantec.com)>; Johnston, Anthony <[Anthony.Johnston@stantec.com](mailto:Anthony.Johnston@stantec.com)>  
**Subject:** RE: PC2025-0177 - Updated Boundary Conditions Request - 1345 Baseline Road

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**ATTENTION : Ce courriel provient d'un expéditeur externe. Ne cliquez sur aucun lien et n'ouvrez pas de pièce jointe, excepté si vous connaissez l'expéditeur.**

Hi Bruce, the wastewater peak flows projected are around 8.1 L/s from Building A, 6.6 L/s from Building B (14.8 L/s total from Phase 1), 5.4 L/s from Building C, and 7.5 L/s from Building D (12.9 L/s total from Phase 2).

Attached is the sanitary design sheet for further information.

Please advise if you have any questions or require further information.

Thanks,

**Michael Wu, EIT**  
Civil Engineering Intern  
He, him

## Appendix D Stormwater Management

### D.1 Modified Rational Method Calculation Sheets



## Stormwater Management Calculations

File No: 160402175  
 Project: 1345 Baseline Road  
 Date: 27-Apr-26

SWM Approach:  
 Post-development to Pre-development flows

**Post-Development Site Conditions:**

**Overall Runoff Coefficient for Site and Sub-Catchment Areas**

Runoff Coefficient Table								
Catchment Type	Sub-catchment Area	ID / Description		Area (ha) "A"	Runoff Coefficient "C"		"A x C"	Overall Runoff Coefficient
					Hard	Soft		
Phase 2	EAST, ROOF-CD		Hard	0.442	0.9	0.398	0.420	0.76
			Soft	0.111	0.2	0.022		
		Subtotal			0.553			
Phase 1	WEST, ROOF-A, ROOF-B		Hard	0.484	0.9	0.436	0.451	0.80
			Soft	0.076	0.2	0.015		
		Subtotal			0.561			
Uncontrolled - Non-Tributary	UNC-1		Hard	0.059	0.9	0.053	0.058	0.70
			Soft	0.024	0.2	0.005		
		Subtotal			0.083			
<b>Total</b>					<b>1.197</b>		<b>0.929</b>	
<b>Overall Runoff Coefficient= C:</b>								<b>0.78</b>

Total Roof Areas	0.000 ha
Total Tributary Surface Areas (Controlled and Uncontrolled)	1.114 ha
Total Tributary Area to Outlet	1.114 ha
 Total Uncontrolled Areas (Non-Tributary)	 0.083 ha
 Total Site	 1.197 ha

# Stormwater Management Calculations

## Project #160402175, 1345 Baseline Road Modified Rational Method Calculations for Storage

2 yr Intensity City of Ottawa	$I = a/(t + b)^c$	a =	732.951	t (min)	I (mm/hr)
		b =	6.199	10	76.8
		c =	0.81	20	52.0
				30	40.0
			40	32.9	
			50	28.0	
			60	24.6	
			70	21.9	
			80	19.8	
			90	18.1	
			100	16.7	
			110	15.6	
			120	14.6	

### 2 YEAR Predevelopment Target Release from Portion of Site

Subdrainage Area: Predevelopment Tributary Area to Outlet  
Area (ha): 1.1965  
C: 0.50

Typical Time of Concentration

tc (min)	I (2 yr) (mm/hr)	Qtarget (L/s)
10	76.8	127.7

### 2 YEAR Modified Rational Method for Entire Site

Subdrainage Area: EAST, ROOF-CD Phase 2  
Area (ha): 0.55  
C: 0.76

tc (min)	I (2 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m³)
10	76.8	89.7	44.2	45.5	27.3
20	52.0	60.8	44.2	16.5	19.9
30	40.0	46.8	44.2	2.5	4.6
40	32.9	38.4	38.4	0.0	0.0
50	28.0	32.8	32.8	0.0	0.0
60	24.6	28.7	28.7	0.0	0.0
70	21.9	25.6	25.6	0.0	0.0
80	19.8	23.2	23.2	0.0	0.0
90	18.1	21.2	21.2	0.0	0.0
100	16.7	19.6	19.6	0.0	0.0
110	15.6	18.2	18.2	0.0	0.0
120	14.6	17.0	17.0	0.0	0.0

Stage	Head (m)	Discharge (L/s)	Vreq (cu. m)	Vavail (cu. m)	Volume Check
2-year Water Level	-	44.2	27.3	165.0	OK

Subdrainage Area: WEST, ROOF-A, ROOF-B Phase 1  
Area (ha): 0.56  
C: 0.80

tc (min)	I (2 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m³)
10	76.8	98.3	47.5	48.8	29.3
20	52.0	65.2	47.5	17.8	21.3
30	40.0	50.2	47.5	2.7	4.9
40	32.9	41.2	41.2	0.0	0.0
50	28.0	35.2	35.2	0.0	0.0
60	24.6	30.8	30.8	0.0	0.0
70	21.9	27.5	27.5	0.0	0.0
80	19.8	24.9	24.9	0.0	0.0
90	18.1	22.7	22.7	0.0	0.0
100	16.7	21.0	21.0	0.0	0.0
110	15.6	19.5	19.5	0.0	0.0
120	14.6	18.3	18.3	0.0	0.0

Stage	Head (m)	Discharge (L/s)	Vreq (cu. m)	Vavail (cu. m)	Volume Check
2-year Water Level	0.0	0.0	47.5	29.3	175.0 OK

Subdrainage Area: UNC-1 Uncontrolled - Non-Tributary  
Area (ha): 0.08  
C: 0.70

tc (min)	I (2 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m³)
10	76.8	12.4	12.4		
20	52.0	8.4	8.4		
30	40.0	6.5	6.5		
40	32.9	5.3	5.3		
50	28.0	4.5	4.5		
60	24.6	4.0	4.0		
70	21.9	3.5	3.5		
80	19.8	3.2	3.2		
90	18.1	2.9	2.9		
100	16.7	2.7	2.7		
110	15.6	2.5	2.5		
120	14.6	2.3	2.3		

SUMMARY TO OUTLET		Vrequired	Vavailable*
Tributary Area	1.114 ha		
Total 2yr Flow to Sewer	92 L/s	57	340 m³ OK

## Project #160402175, 1345 Baseline Road Modified Rational Method Calculations for Storage

100 yr Intensity City of Ottawa	$I = a/(t + b)$	a =	1735.688	t (min)	I (mm/hr)
		b =	6.014	10	178.6
		c =	0.820	20	120.0
				30	91.9
			40	75.1	
			50	64.0	
			60	55.9	
			70	49.8	
			80	45.0	
			90	41.1	
			100	37.9	
			110	35.2	
			120	32.9	

### 100 YEAR Predevelopment Target Release from Portion of Site

Subdrainage Area: Predevelopment Tributary Area to Outlet  
Area (ha): 1.1965  
C: 0.50

Estimated Time of Concentration after Development

tc (min)	I (100 yr) (mm/hr)	Q100yr (L/s)
10	178.6	297.0

### 100 YEAR Modified Rational Method for Entire Site

Subdrainage Area: EAST, ROOF-CD Phase 2  
Area (ha): 0.55  
C: 0.95

tc (min)	I (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m³)
10	178.6	260.8	44.2	216.5	129.9
20	120.0	175.2	44.2	130.9	157.1
30	91.9	134.2	44.2	89.9	161.9
40	75.1	109.7	44.2	65.5	157.2
50	64.0	93.4	44.2	49.2	147.5
60	55.9	81.6	44.2	37.4	134.6
70	49.8	72.7	44.2	28.5	119.6
80	45.0	65.7	44.2	21.5	103.0
90	41.1	60.0	44.2	15.8	85.3
100	37.9	55.4	44.2	11.1	66.7
110	35.2	51.4	44.2	7.2	47.3
120	32.9	48.0	44.2	3.8	27.4

Stage	Head (m)	Discharge (L/s)	Vreq (cu. m)	Vavail (cu. m)	Volume Check
100-year Water Level	-	44.2	161.9	165.0	OK

Subdrainage Area: WEST, ROOF-A, ROOF-B Phase 1  
Area (ha): 0.56  
C: 1.00

tc (min)	I (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m³)
10	178.6	278.3	47.5	230.8	138.5
20	120.0	186.9	47.5	139.4	167.3
30	91.9	143.2	47.5	95.7	172.2
40	75.1	117.1	47.5	69.6	167.1
50	64.0	99.7	47.5	52.2	156.5
60	55.9	87.1	47.5	39.6	142.6
70	49.8	77.6	47.5	30.1	126.4
80	45.0	70.1	47.5	22.6	108.6
90	41.1	64.1	47.5	16.6	89.5
100	37.9	59.1	47.5	11.6	69.5
110	35.2	54.9	47.5	7.4	48.7
120	32.9	51.3	47.5	3.8	27.2

Stage	Head (m)	Discharge (L/s)	Vreq (cu. m)	Vavail (cu. m)	Volume Check
100-year Water Level	0.0	0.0	47.5	172.2	175.0 OK

Subdrainage Area: UNC-1 Uncontrolled - Non-Tributary  
Area (ha): 0.08  
C: 0.88

tc (min)	I (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m³)
10	178.6	36.0	36.0		
20	120.0	24.2	24.2		
30	91.9	18.5	18.5		
40	75.1	15.2	15.2		
50	64.0	12.9	12.9		
60	55.9	11.3	11.3		
70	49.8	10.0	10.0		
80	45.0	9.1	9.1		
90	41.1	8.3	8.3		
100	37.9	7.6	7.6		
110	35.2	7.1	7.1		
120	32.9	6.6	6.6		

SUMMARY TO OUTLET		Vrequired	Vavailable*
Tributary Area	1.114 ha		
Total 100yr Flow to Sewer	92 L/s	334	340 m³ OK

# Stormwater Management Calculations

## Project #160402175, 1345 Baseline Road Modified Rational Method Calculations for Storage

Non-Tributary Area	0.083 ha
Total 2yr Flow Uncontrolled	12 L/s
Total Area	1.197 ha
Total 2yr Flow	104 L/s
Target	128 L/s

## Project #160402175, 1345 Baseline Road Modified Rational Method Calculations for Storage

Non-Tributary Area	0.083 ha
Total 100yr Flow Uncontrolled	36 L/s
Total Area	1.197 ha
Total 100yr Flow	128 L/s
Target	128 L/s

## D.2 Storm Sewer Design Sheet





1345 Baseline Road

**STORM SEWER  
DESIGN SHEET  
(City of Ottawa)**

DESIGN PARAMETERS

$I = a / (t+b)^c$  (As per City of Ottawa Guidelines, 2012)

	1:2 yr	1:5 yr	1:10 yr	1:100 yr
a =	732.951	998.071	1174.184	1735.688
b =	6.199	6.053	6.014	6.014
c =	0.810	0.814	0.816	0.820

MANNING'S n = 0.013  
 BEDDING CLASS = B  
 MINIMUM COVER: 2.00 m  
 TIME OF ENTRY: 10 min

DATE: 2026-05-07  
 REVISION: 1  
 DESIGNED BY: MW  
 CHECKED BY: -  
 FILE NUMBER: 160402175

LOCATION			DRAINAGE AREA																	PIPE SELECTION																	
AREA ID NUMBER	FROM M.H.	TO M.H.	AREA (2-YEAR) (ha)	AREA (5-YEAR) (ha)	AREA (10-YEAR) (ha)	AREA (100-YEAR) (ha)	AREA (ROOF) (ha)	C (2-YEAR) (-)	C (5-YEAR) (-)	C (10-YEAR) (-)	C (100-YEAR) (-)	A x C (2-YEAR) (ha)	ACCUM AxC (2YR) (ha)	A x C (5-YEAR) (ha)	ACCUM AxC (5YR) (ha)	A x C (10-YEAR) (ha)	ACCUM AxC (10YR) (ha)	A x C (100-YEAR) (ha)	ACCUM AxC (100YR) (ha)	T of C (min)	I <sub>2</sub> -YEAR (mm/h)	I <sub>5</sub> -YEAR (mm/h)	I <sub>10</sub> -YEAR (mm/h)	I <sub>100</sub> -YEAR (mm/h)	Q <sub>CONTROL</sub> (L/s)	ACCUM. Q <sub>CONTROL</sub> (L/s)	Q <sub>ACT</sub> (CIA/360) (L/s)	LENGTH (m)	PIPE WIDTH OR DIAMETE (mm)	PIPE HEIGHT (mm)	PIPE SHAPE (-)	MATERIAL (-)	CLASS (-)	SLOPE (%)	Q <sub>cap</sub> (FULL) (L/s)	% FULL (-)	VEL. (FULL) (m/s)
ROOF-A, ROOF-B, WEST	102A	102	0.36	0.00	0.00	0.00	0.20	0.75	0.00	0.00	0.00	0.267	0.267	0.000	0.000	0.000	0.000	0.000	0.000	10.00	76.81	104.19	122.14	178.56	47.5	47.5	104.5	1.5	300	300	CIRCULAR	CONCRETE	-	1.00	96.2	108.70%	1.37
	102	101	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.267	0.000	0.000	0.000	0.000	0.000	0.000	10.02	76.74	104.10	122.03	178.39	0.0	47.5	104.5	24.9	300	300	CIRCULAR	CONCRETE	-	0.89	90.5	115.39%	1.29
<b>10.34</b>																																					
PARK	104	103	0.12	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.024	0.024	0.000	0.000	0.000	0.000	0.000	0.000	10.00	76.81	104.19	122.14	178.56	0.0	0.0	5.1	26.7	300	300	CIRCULAR	CONCRETE	-	1.00	96.2	5.30%	1.37
	<b>10.74</b>																																				
ROOF-CD, EAST	8A	106	0.31	0.00	0.00	0.00	0.24	0.65	0.00	0.00	0.00	0.201	0.201	0.000	0.000	0.000	0.000	0.000	0.000	10.00	76.81	104.19	122.14	178.56	44.2	44.2	87.2	1.7	300	300	CIRCULAR	CONCRETE	-	1.00	96.2	90.67%	1.37
	106	105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.201	0.000	0.000	0.000	0.000	0.000	0.000	10.02	76.72	104.08	122.01	178.37	0.0	44.2	87.1	25.0	300	300	CIRCULAR	CONCRETE	-	1.00	96.2	90.62%	1.37
<b>10.32</b>																																					

**With every community, we redefine what's possible.**

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